Rio Blanco Oil Shale Project

PROGRESS REPORT 10

GEOTECHNICAL DATA GATHERING PROJECT

HYDROLOGIC PROGRAM
SECTION 1.2
RAW DATA
INTERPRETIVE TEXT
AND
RAW DATA APPENDIX

To Area Oil Shale Supervisor
United States Geological Survey

by
Wright Water Engineers
for
Gulf Oil Corporation

Standard Oil Company (Indiana)

88064867

TN
859
.C64
R564
no 10
sect 1.2

PROGRESS REPORT 10

DECEMBER 1976, JANUARY, FEBRUARY, 1977

GEOTECHNICAL DATA GATHERING PROJECT

HYDROLOGIC PROGRAM

SECTION 1.2

BLM Library
D-553A, Building 50
Denver Federal Center
P. O. Box 25047
Denver, CO 80225-0047

INTERPRETIVE TEXT

APRIL 15, 1977

To

AREA OIL SHALE SUPERVISOR
UNITED STATES GEOLOGICAL SURVEY

By

WRIGHT WATER ENGINEERS, INC.
For
GULF OIL CORPORATION
And
STANDARD OIL COMPANY (INDIANA)

TABLE OF CONTENTS

INTERPRETIVE TEXT

Section	Title	Page
1.2	HYDROLOGIC PROGRAM	1
1.2.1	Surface Water Monitoring Stations	3
1.2.2	Surface Water Data Collection	6
1.2.3	Alluvial Aquifers	25
1.2.4	Deep Aquifer Drilling Program	39
1.2.5	Deep Aquifer Completion Program	39
1.2.6	Upper and Lower Aquifer Pumping Tests	39
1.2.7	Deep Aquifer Monitoring	40
1.2.8	Hydrologic Program Summary	44
1.2.8.1	Surface Water	44
1.2.8.2	Alluvial Aquifer	44
1.2.8.3	Deep Aquifer Monitoring	45

LIST OF TABLES

Table Number		Page
1.2-1	Location and USGS Identification Numbers for Stream and Rain Gaging Stations	4
1.2-2	Data Collection Schedule for Stream Gaging Stations	8
1.2-3	Summary Water Analysis-Stream Gaging Station USGS 09306244-Corral Gulch South of 84 Mesa; Year 1977	9
1.2-4	Data Collection Schedule for Alluvial Holes	27
1.2-5	Alluvial Aquifer Water Analysis Summary (Wet Chemical) March 1975 through February 1977	28
1.2.6	Alluvial Aquifer Water Analysis Summary (Qualitative Spectrographics), March 1975 through February 1977	29
1.2-7	Alluvial Aquifer, Sampling Field Parameters, November 1976 and February 1977	38
1.2-8	Data Collection Schedule for G-S M-5	42

LIST OF FIGURES

Figure Number	Title	Page
1.2-1	Stream Gaging Station Map	5
1.2-2	Continuous Mean Discharge, Water Year 1977 Corral Gulch South of 84 Mesa	10
1.2-3	Continuous Mean Conductivity, Water Year 1977 Corral Gulch South of 84 Mesa	11
1.2-4	Continuous Mean Temperature, Water Year 1977 Corral Gulch South of 84 Mesa	12
1.2-5	Sediment Discharge, Water Year 1976, Box Elder Gulch Near West Line Tract C-a	13
1.2-6	Sediment Discharge, Water Year 1976, Corral Gulch Near West Line Tract C-a	14
1.2-7	Sediment Discharge, Water Year 1976, Dry Fork near west Line Tract C-a	15
1.2-8	Sediment Discharge, Water Year 1976, "Rinky Dink" Gulch Near East Line Tract C-a	16
1.2-9	Sediment Discharge, Water Year 1976, Corral Gulch East of Tract C-a	17
1.2-10	Sediment Discharge, Water Year 1976, Corral Gulch south of 85 Mesa	18
1.2-11	Sediment Discharge, Water Year 1976, Stake Springs Draw Near Confluence with Corral Gulch.	19
1.2-12	Sediment Discharge, Water Year 1976, Tributary to Yellow Creek East of 84 Mesa	20
1.2-13	Sediment Discharge, Water Year 1976, Upper Big Duck Creek North of 84 Mesa	21
1.2-14	Sediment Discharge, Water Year 1976, Lower Big Duck Creek North of 84 Mesa	22
1.2-15	Sediment Discharge, Water Year 1976, Yellow Creek Near White River, Colorado	23
1.2.16	Sediment Discharge, Water Year, 1975, Corral Gulch Near West Line Tract C-a	24
1.2-17	Water Depth, Water Year 1977, G-S S-7	30
1.2-18	Water Depth, Water Year 1977, G-S S-8	31
1.2-19	Water Depth, Water Year 1977, G-S S-11	32
1.2-20	Water Depth, Water Year 1977, G-S S-12	33

LIST OF FIGURES
Continued

Figure Number	Title	Page
1.2-21	Water Depth, Water Year 1977, G-S S-19	34
1.2-22	Water Depth, Water Year 1977, G-S S-22	35
1.2-23	Water Depth, Water Year 1977, G-S S-23	36
1.2-24	Water Depth, Water Year 1977, G-S S-24	37
1.2-25	RBOSP Tract C-a, Monitoring Holes	41
1.2-26	Water Depth, Core Hole G-S M-5, Water Year 1977	43

INDEX OF DATA FOR RIO BLANCO OIL SHALE PROGRESS REPORTS 2-9
HYDROLOGIC PROGRAM, SECTION 1.2
SURFACE WATER DATA COLLECTION PROGRAM [1]

Station	Discharge		Water Quality		Precipitation		
	Instantaneous	Continuous	Data	Summary	Recording	Storage	Intensity
Box Elder Gulch near west line Tract C-a	R2, R3V1, R4	R5, R6, R7, R8 R9	R3V1, R6V R7V, R8V R9V	R4, R5, R6, R7, R8, R9		R4, R4V, R5, R5V, R6, R6V, R7, R7V, R8, R8V R9, R9V	
Dry Fork near west line Tract C-a						R4, R4V, R5, R5V, R6, R6V R7, R7V, R8, R8V R9, R9V	
Corral Gulch near west line Tract C-a	R2, R3, R3V1, R4	R5, R6, R7, R8, R9	R3V1, R6V R7V, R8V, R9V	R3, R4, R5 R6, R7, R8, R9		R4, R4V, R5, R5V, R6, R6V, R7, R7V, R8, R8V R9, R9V	
Corral Gulch east of Tract C-a	R3, R3V1, R4	R5, R6, R7, R8, R9	R3V1, R6V R7V, R8V, R9V	R3, R4, R5, R6, R7, R8, R9			
Corral Gulch south of 84 Mesa	R5, R6	R7, R8, R9	R6V, R7V, R8V R9V	R5, R6, R7, R8, R9			
Stake Spring Draw near Confluence with Corral Gulch		R7, R8, R9	R7V, R8V	R7, R8, R9	R3, R3V1, R4, R4V, R5, R5V, R6, R6V, R7, R7V, R8, R8V, R9, R9V		R5V, R6V
Yellow Creek near White River, Colorado	R2, R3, R3V1 R4,	R5, R6, R7, R8, R9	R6V, R7V, R8V, R9V	R5, R6, R7, R8, R9	R3, R3V, R4, R4V, R5, R5V, R6, R6V, R7, R7V, R8, R8V, R9, R9V		R5V, R6V
Corral Gulch near Cathedral Bluffs					R3, R3Va, R4, R4V, R5, R5V, R7, R7V, R8, R8V, R9, R9V		R5V, R6V
Tributary to Yellow Creek east of 84 Mesa		R7, R8, R9	R7V, R8V	R7, R8, R9			
"Rinky Dink" Gulch near east line Tract C-a		R7, R8	R7V, R8V	R7, R8, R9			
Upper Big Duck Creek north of 84 Mesa		R7, R8, R9	R7V, R8V	R7, R8, R9			
Lower Big Duck Creek north of 84 Mesa		R7, R8, R9	R7V, R8V	R7, R8, R9			

1. LEGEND: Applies to Alluvial Aquifer Data and Deep Aquifer Data Program.

R: RBOSP Progress Report, Hydrologic Program

V: RBOSP Hydrologic Program Raw Data Volume

A: RBOSP Progress Report, Hydrologic Program, Interpretive Text Appendix

e.g.: R3V1 RBOSP Progress Report 3, Hydrologic Program, Raw Data Volume 1.

TABLE 1.2-7
ALLUVIAL AQUIFERS
NOVEMBER 1976 and FEBRUARY 1977

Observation Hole	Date of Sample	Depth to Water Below Ground Surface (in feet)	Temperature °C	Conductivity umhos/cm	pH
G-S S-7	11/14/76	22.64	9.2	1040	6.0
	2/01/77	23.90	5.6	1200	*
G-S S-8	11/14/76	38.27	8.3	1180	6.0
	2/01/77	40.62	7.8	1350	*
G-S S-11	11/15/76	43.13	6.4	1800	6.3
	2/01/77	44.85	9.3	1830	*
G-S S-12	11/15/76	31.26	6.0	1600	6.4
	2/01/77	33.10	6.8	1640	*
G-S S-19	11/14/76	57.11	8.0	1720	6.2
	2/01/77	55.17	9.2	1550	*
G-S S-22	11/14/76	65.47	8.9	1850	6.0
	2/01/77	65.38	7.8	2000	*
G-S S-23	11/14/76	30.04	8.6	1850	6.0
	2/01/77	29.87	8.2	1900	*
G-S S-24	11/15/77	6.87	7.5	1550	6.1
	2/01/77	6.81	7.2	1750	*

* pH data were not collected in February 1977.

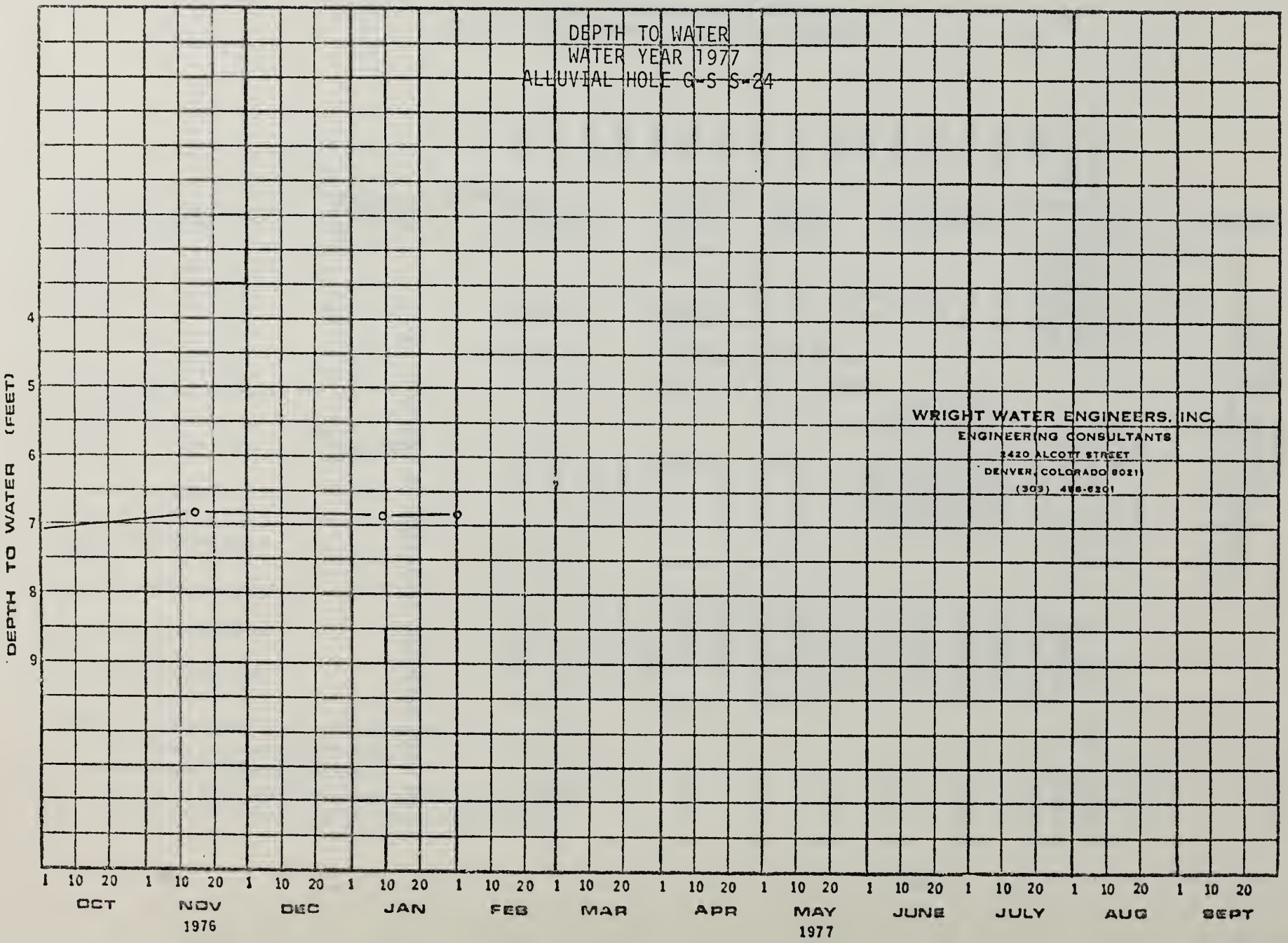

DEPTH TO WATER
WATER YEAR 1977
ALLUVIAL HOLE G-S S-24
DEPTH TO WATER (FEET)
4
5
6
7
8
9
WRIGHT WATER ENGINEERS, INC.
ENGINEERING CONSULTANTS
2420 ALCOTT STREET
DENVER, COLORADO 80211
(303) 458-6301
1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20
OCT
NOV
1976
DEC
JAN
FEB
MAR
APR
MAY
1977
JUNE
JULY
AUG
SEPT

FIGURE 1.2-24

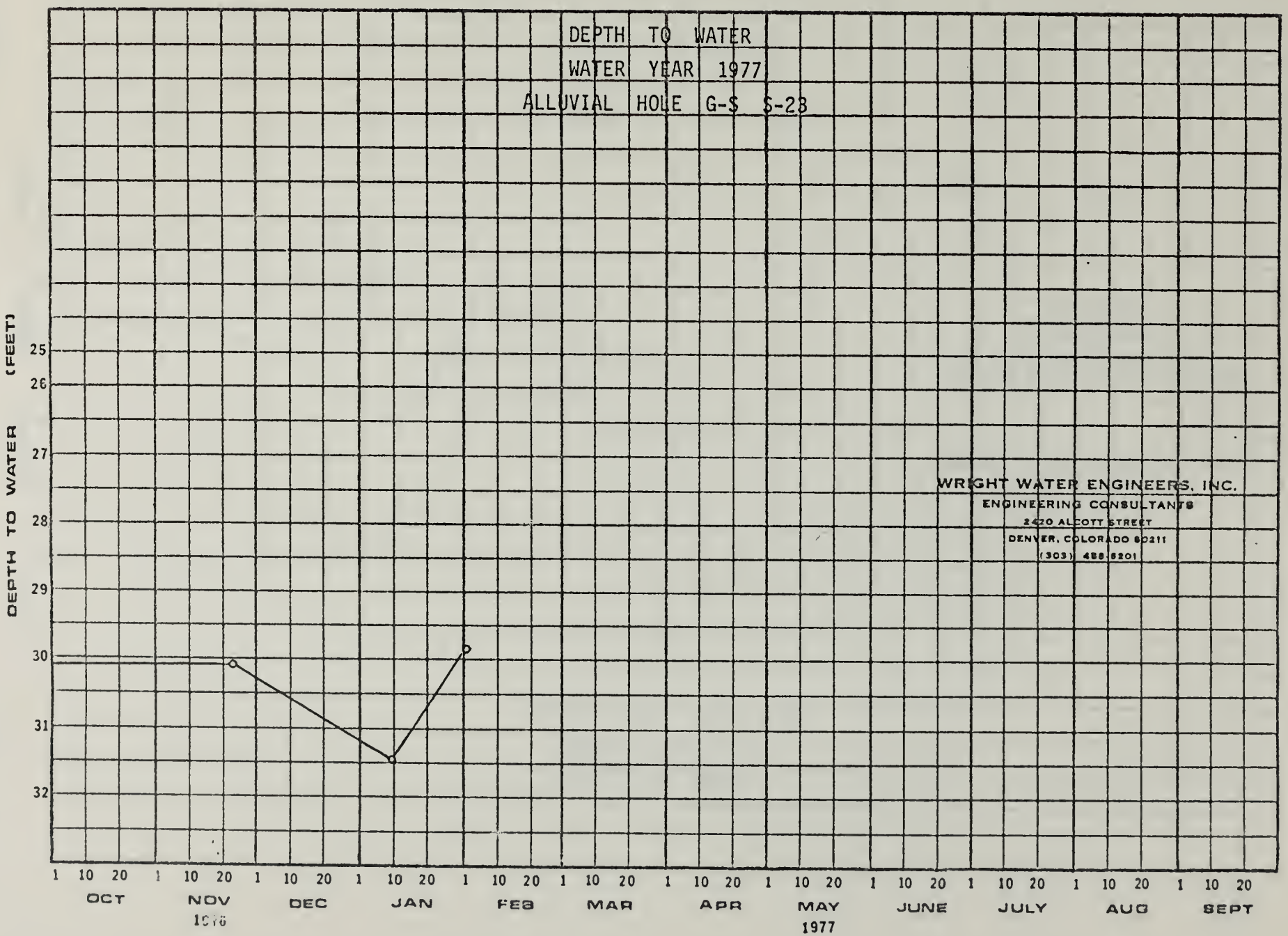

DEPTH TO WATER
WATER YEAR 1977
ALLUVIAL HOLE G-$ $-23
DEPTH TO WATER (FEET)
25
26
27
28
29
30
31
32
1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20
OCT
NOV
1976
DEC
JAN
FEB
MAR
APR
MAY
1977
JUNE
JULY
AUG
SEPT
WRIGHT WATER ENGINEERS, INC.
ENGINEERING CONSULTANTS
2420 ALCOTT STREET
DENVER, COLORADO 80211
(303) 458-5201

FIGURE 1.2-23

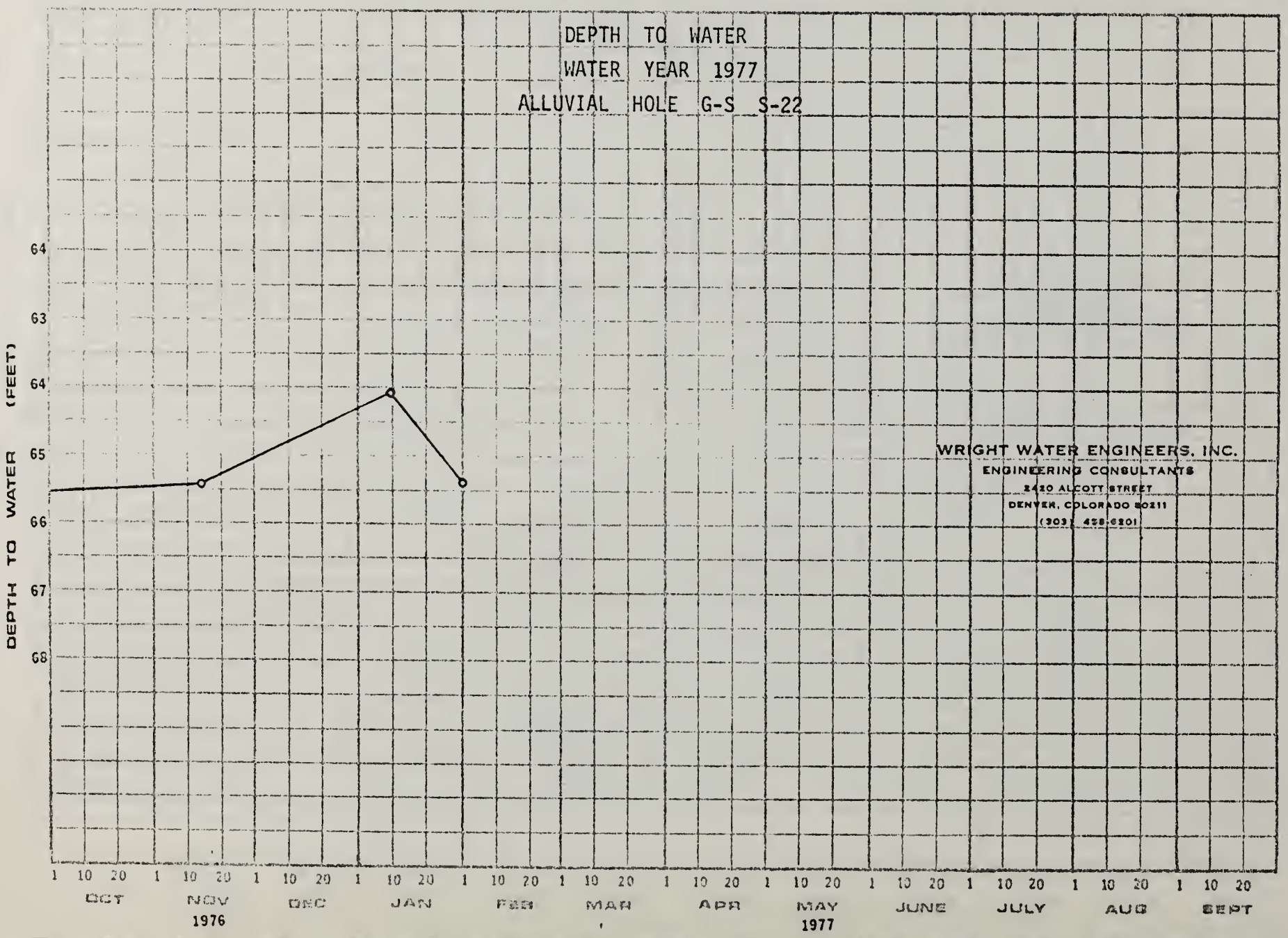

DEPTH TO WATER
WATER YEAR 1977
ALLUVIAL HOLE G-S S-22
DEPTH TO WATER (FEET)
64
63
64
65
66
67
68
1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20
OCT
NOV
1976
DEC
JAN
FEB
MAR
APR
MAY
1977
JUNE
JULY
AUG
SEPT
WRIGHT WATER ENGINEERS, INC.
ENGINEERING CONSULTANTS
2420 ALCOTT STREET
DENVER, COLORADO 80211
(303) 428-6201

FIGURE 1.2-22

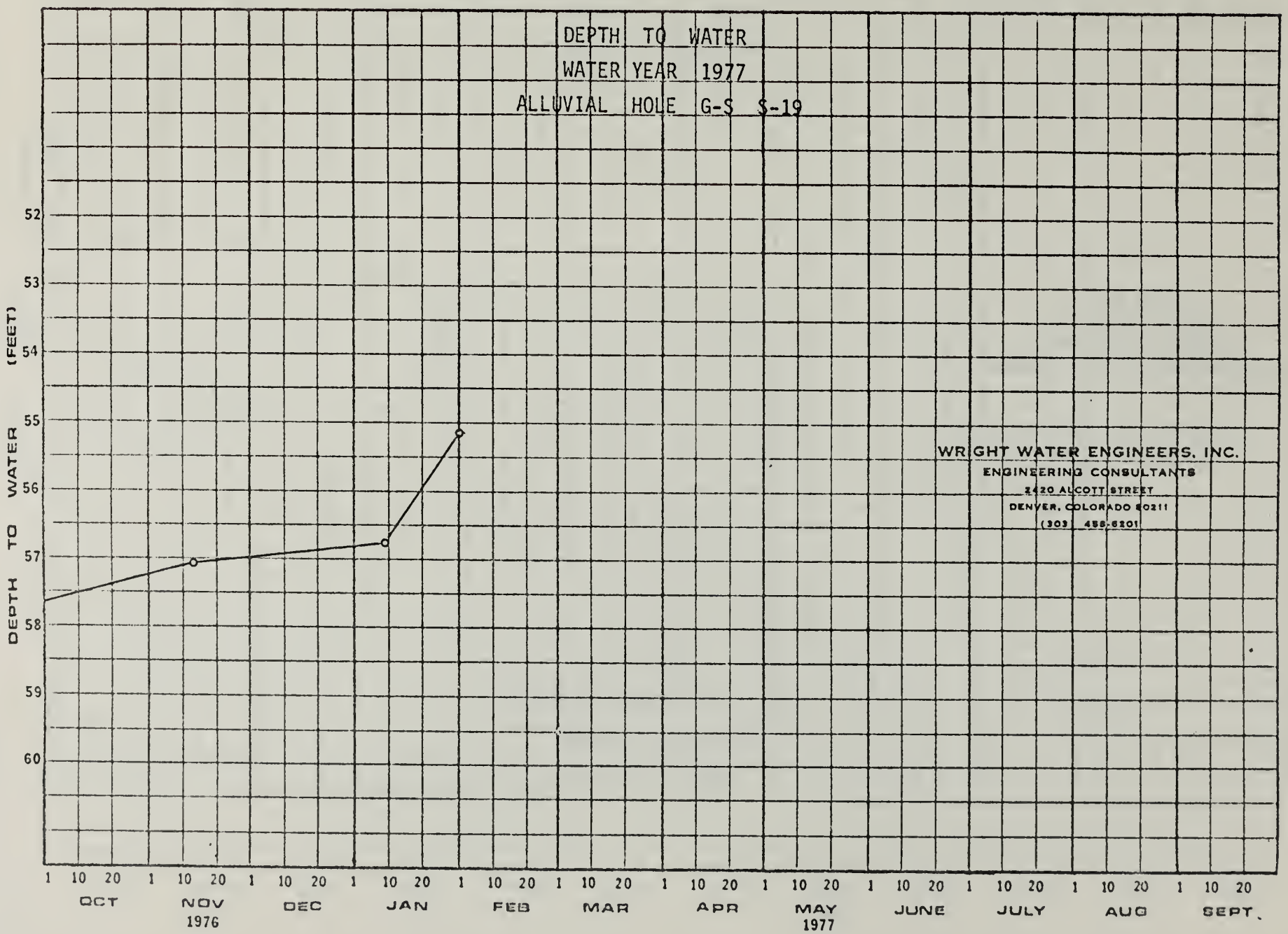

DEPTH TO WATER
WATER YEAR 1977
ALLUVIAL HOLE G-S S-19
DEPTH TO WATER (FEET)
52
53
54
55
56
57
58
59
60
1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20
OCT
NOV
1976
DEC
JAN
FEB
MAR
APR
MAY
1977
JUNE
JULY
AUG
SEPT.
WRIGHT WATER ENGINEERS, INC.
ENGINEERING CONSULTANTS
2420 ALCOTT STREET
DENVER, COLORADO 80211
(303) 455-6201

FIGURE 1.2-21

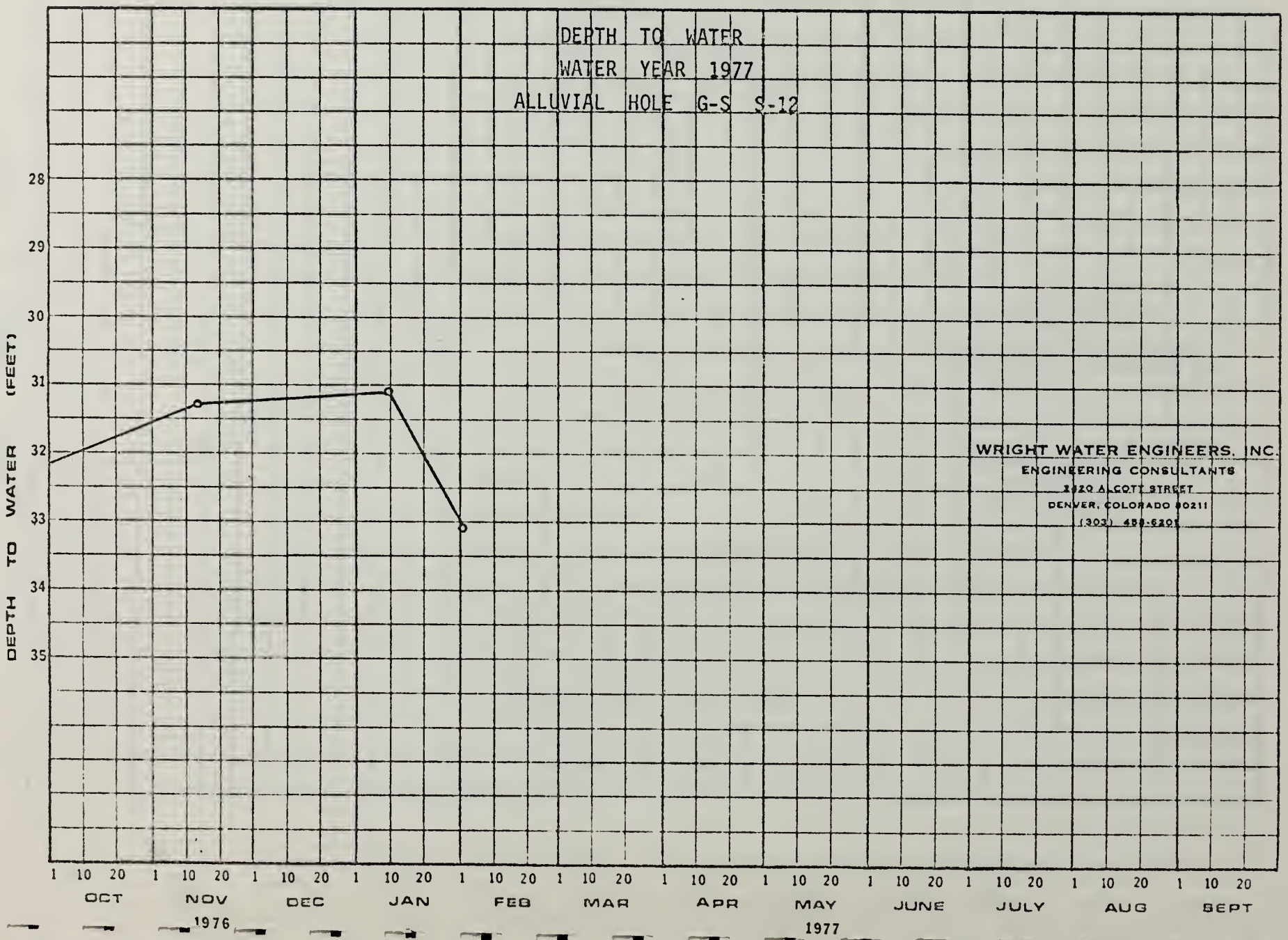

DEPTH TO WATER
WATER YEAR 1977
ALLUVIAL HOLE G-S S-12
DEPTH TO WATER (FEET)
28
29
30
31
32
33
34
35
1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20
OCT NOV DEC JAN FEB MAR APR MAY JUNE JULY AUG SEPT
1976
1977
WRIGHT WATER ENGINEERS, INC.
ENGINEERING CONSULTANTS
2020 ALCOTT STREET
DENVER, COLORADO 80211
(303) 458-6201

FIGURE 1.2-20

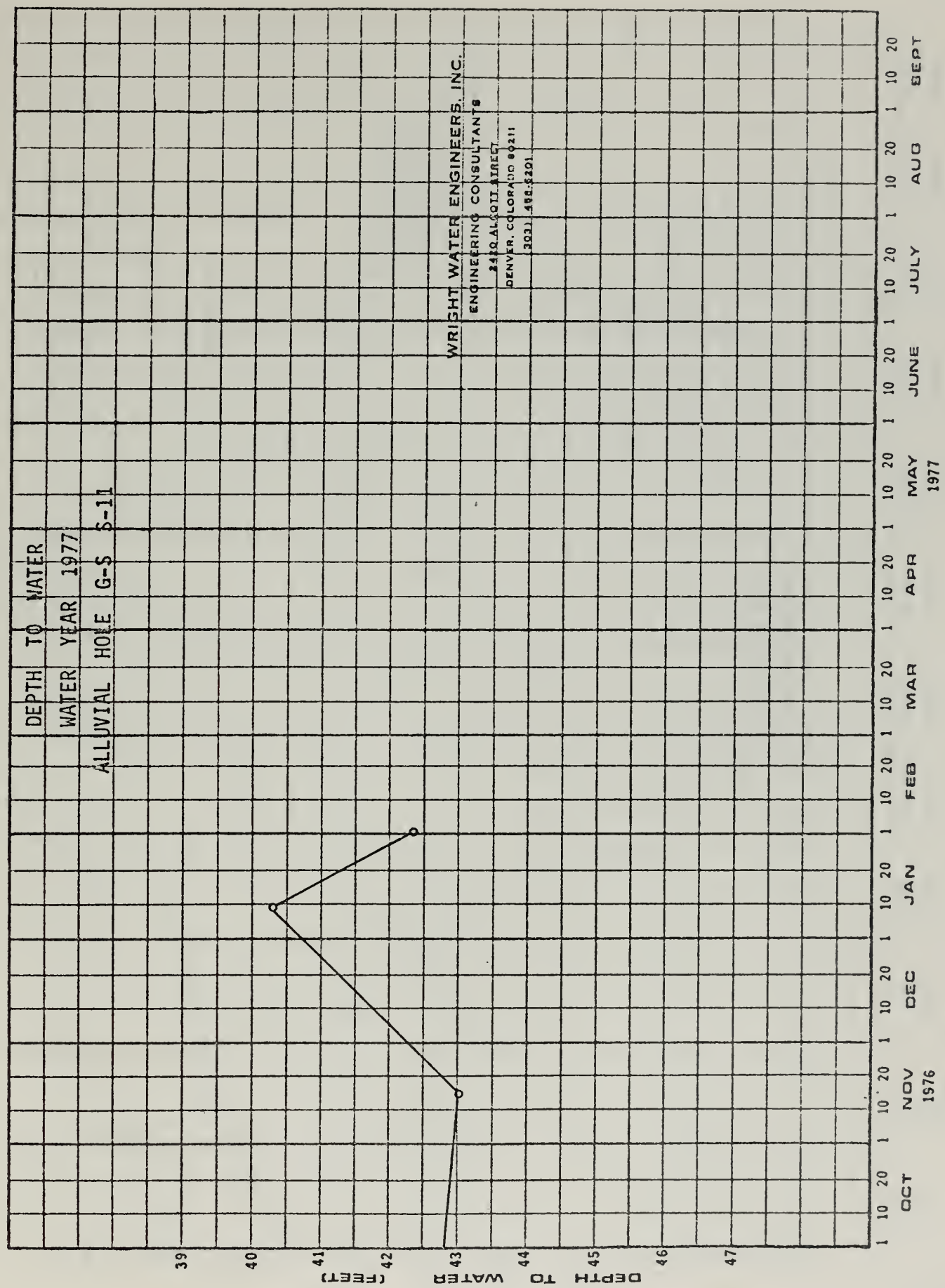

DEPTH TO WATER
WATER YEAR 1977
ALLUVIAL HOLE G-S S-11
WRIGHT WATER ENGINEERS, INC.
ENGINEERING CONSULTANTS
2490 ALCOTT STREET
DENVER, COLORADO 80211
(303) 458-5201
DEPTH TO WATER (FEET)
39
40
41
42
43
44
45
46
47
OCT
NOV
1976
DEC
JAN
FEB
MAR
APR
MAY
1977
JUNE
JULY
AUG
SEPT
1
10
20

FIGURE 1.2-19

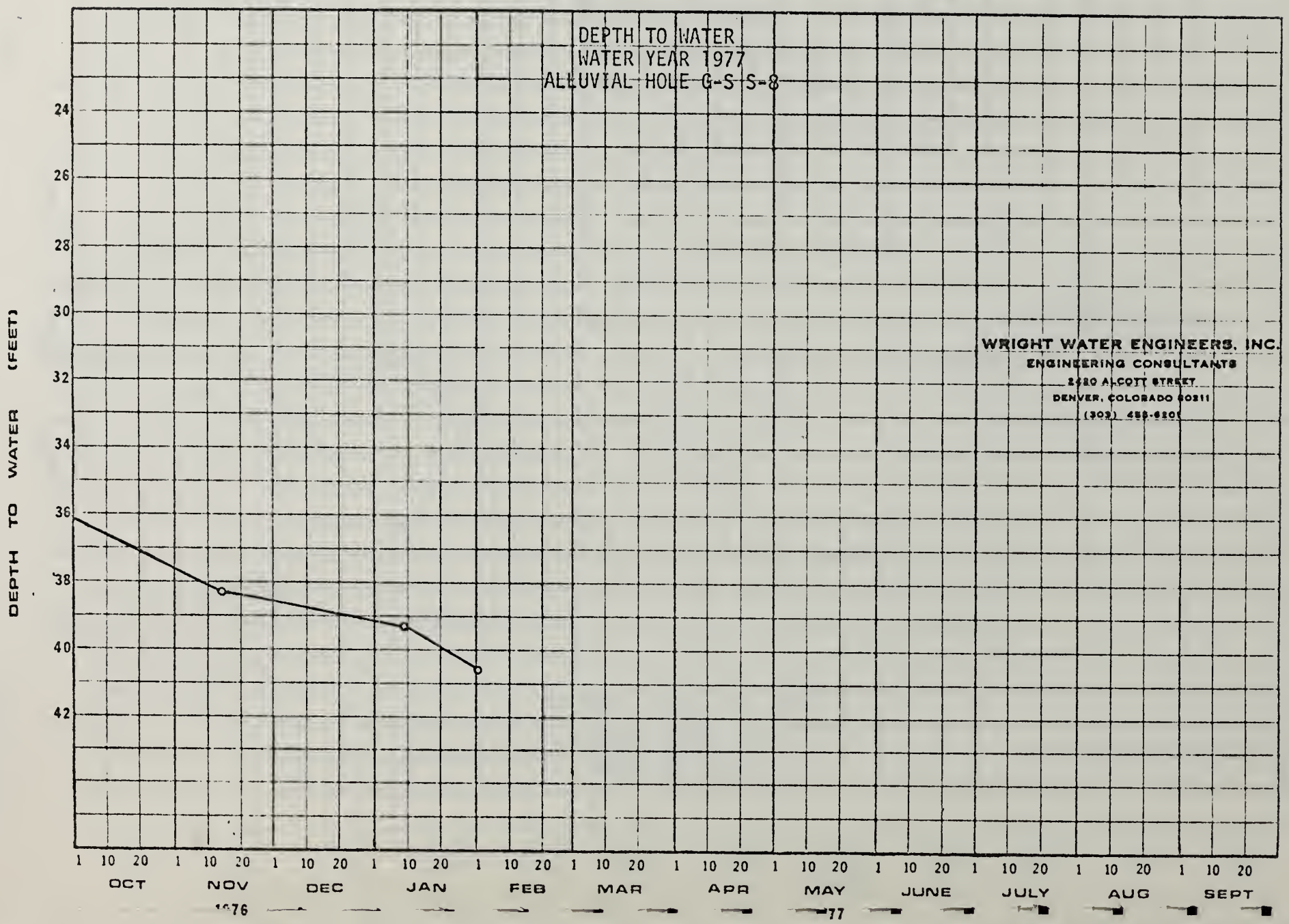

DEPTH TO WATER
WATER YEAR 1977
ALLUVIAL HOLE G-S S-8
DEPTH TO WATER (FEET)
24
26
28
30
32
34
36
38
40
42
1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20
OCT NOV DEC JAN FEB MAR APR MAY JUNE JULY AUG SEPT
1976
77
WRIGHT WATER ENGINEERS, INC.
ENGINEERING CONSULTANTS
2420 ALCOTT STREET
DENVER, COLORADO 80211
(303) 455-6201

FIGURE 1-2.18

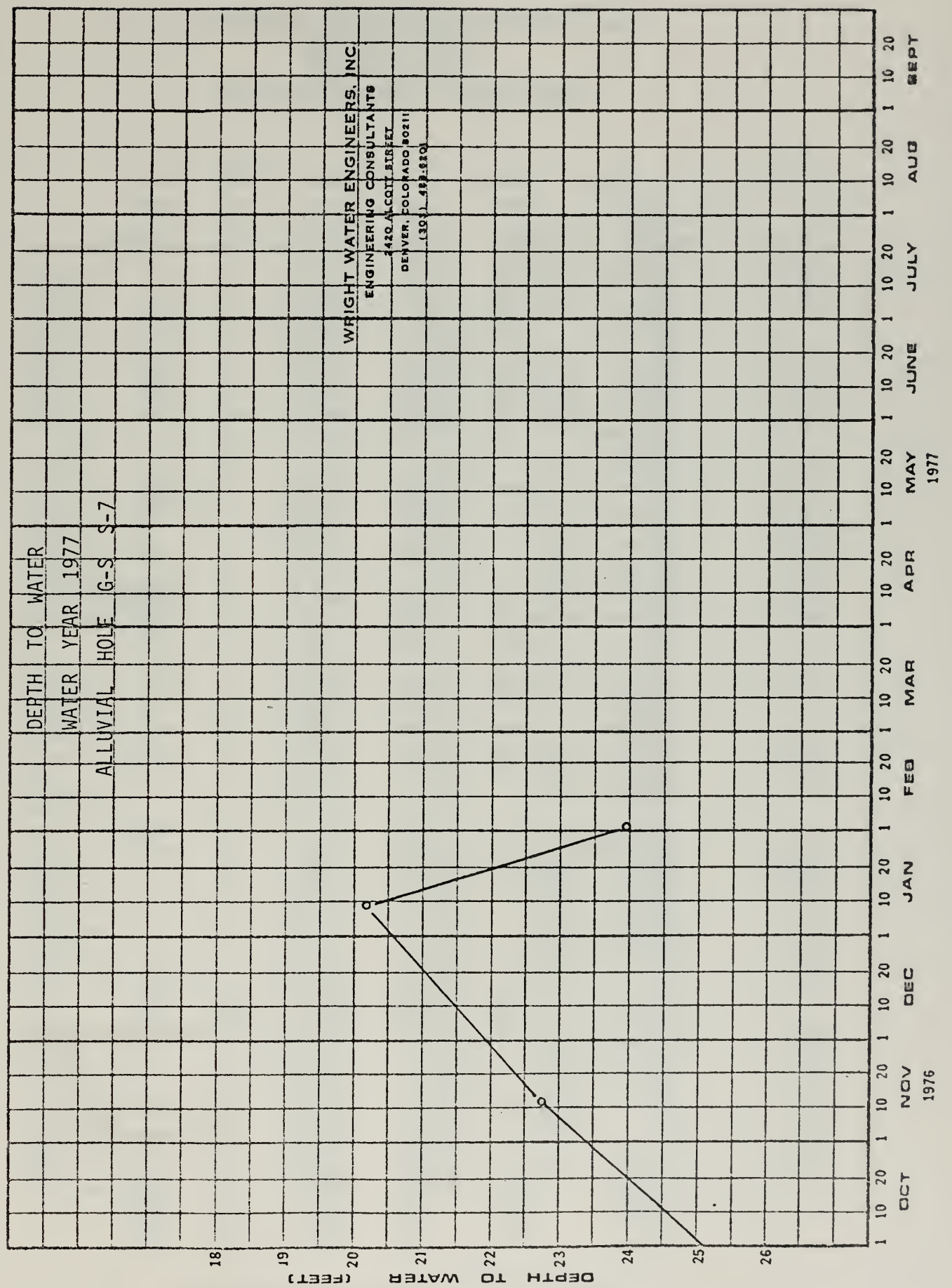

DEPTH TO WATER
WATER YEAR 1977
ALLUVIAL HOLE G-S S-7
WRIGHT WATER ENGINEERS, INC
ENGINEERING CONSULTANTS
2420 ALCOTT STREET
DENVER, COLORADO 80211
(303) 458-5820
DEPTH TO WATER (FEET)
18
19
20
21
22
23
24
25
26
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUNE
JULY
AUG
SEPT
1976
1977

FIGURE 1.2-17

TABLE 1.2-6
SUMMARY OF QUALITATIVE SPECTROGRAPHIC ANALYSIS
ALLUVIAL AQUIFER
Values in Mg/l
MARCH 1975 THROUGH FEBRUARY 1977

Item	Low	High	Average	# Items Averaged	Std. Dev.
Aluminum	0.001	5.000	0.441	127	0.935
Antimony	---	---	---	0	---
Arsenic	---	---	---	0	---
Barium	0.001	0.050	0.008	54	0.013
Beryllium	0.001	0.001	0.001	5	0.000
Bismuth	---	---	---	0	---
Boron	0.010	0.500	0.361	127	0.176
Cadmium	---	---	---	0	---
Calcium	10.000	Major	10.000	6	0.000
Cerium	---	---	---	0	---
Cesium	0.001	0.001	0.001	1	0.000
Chromium	---	0.020	0.004	17	0.006
Cobalt	0.001	0.001	0.001	4	0.000
Columbium	---	---	---	0	---
Copper	0.001	0.050	0.013	126	0.014
Dysprosium	---	---	---	0	---
Erbium	---	---	---	0	---
Europium	---	---	---	0	---
Gadolinium	---	---	---	0	---
Gallium	0.001	0.010	0.004	6	0.005
Germanium	0.001	0.001	0.001	1	0.000
Gold	---	---	---	0	---
Hafnium	---	---	---	0	---
Holmium	---	---	---	0	---
Indium	---	---	---	0	---
Iridium	---	---	---	0	---
Iron	0.001	5.000	0.251	126	0.709
Lanthanum	---	---	---	0	---
Lead	0.001	0.500	0.030	54	0.076
Lithium	0.001	0.100	0.007	86	0.015
Lutetium	---	---	---	0	---
Mangesium	5.000	Major	2228.111	9	4405.680
Manganese	0.001	0.500	0.068	118	0.121
Mercury	---	---	---	0	---
Molybdenum	0.001	0.050	0.009	87	0.013
Neodymium	---	---	---	0	---
Nickel	0.001	0.070	0.011	7	0.026
Osmium	---	---	---	0	---
Palladium	---	---	---	0	---
Platinum	---	---	---	0	---
Potassium	0.010	2.000	0.519	126	0.507
Praseodymium	---	---	---	0	---
Radium (pci/l)	0.100	1.200	0.335	60	0.231
Rhenium	---	---	---	0	---
Rhodium	---	---	---	0	---
Rubidium	---	---	---	0	---
Ruthenium	---	---	---	0	---
Samarium	---	---	---	0	---
Scandium	---	---	---	0	---
Selenium	---	---	---	0	---
Silicon	2.000	Major	4.897	117	2.601
Silver	---	0.100	0.008	38	0.022
Sodium	1.000	Major	6.239	88	2.758
Strontium	0.010	0.100	0.105	116	0.085
Tantalum	---	---	---	0	---
Terbium	---	---	---	0	---
Thallium	---	---	---	0	---
Thorium	---	---	---	0	---
Thulium	---	---	---	0	---
Tin	0.001	0.001	0.001	15	0.000
Titanium	0.001	1.000	0.029	91	0.118
Tungsten	---	---	---	0	---
Uranium	0.005	0.008	0.006	2	0.002
Vanadium	0.001	0.020	0.007	10	0.008
Ytterbium	0.001	0.001	0.001	5	0.000
Yttrium	0.010	0.020	0.012	5	0.004
Zinc	0.001	0.020	0.005	44	0.006
Zirconium	0.010	0.010	0.010	2	0.000

--- Less than minimum detectable amount
Major - Concentration too large to quantify (see wet chemical analysis)

TABLE 1.2-5

SUMMARY OF WET CHEMICAL ANALYSIS
ALLUVIAL AQUIFER
Values in Mg/l

MARCH 1975 THROUGH FEBRUARY 1977

Item	Low	High	Average	# items Averaged	Std. Dev.
Alkalinity	51.000	1505.000	473.398	156	124.974
Aluminum	< 0.100	1.200	0.127	26	0.285
Ammonia	0.030	6.4	0.537	107	0.883
Arsenic	< 0.010	< 0.100		118	
Barium	< 1.000	< 1.000		96	
Bicarbonate	360.000	810.000	562.019	156	101.001
Boron	< 0.010	27.000	0.991	148	2.674
Cadmium	< 0.010	< 1.100	0.027	126	0.105
Calcium	28.000	240.000	98.365	156	34.050
Carbonate	< 0.010	120.000	7.323	155	17.153
Chloride	1.300	71.000	17.731	156	8.906
Chromium	< 0.010	0.200	0.007	125	0.034
Conductivity (umhos/cm)	860.000	2275.000	1551.422	155	344.126
Copper	< 0.010	8.000	0.424	126	1.117
Cyanide	< 0.010	0.200	0.003	125	0.019
Dissolved Solids	640.000	2090.000	1185.256	156	288.954
Fluoride	< 0.100	1.200	0.326	155	0.173
Gross Alpha (pcl/l)	0.200	31.000	10.977	99	6.802
Gross Beta (pcl/l)	1.000	35.000	12.644	36	9.542
Hardness (total)	280.000	820.000	606.458	142	141.396
Iron	< 0.050	28.000	4.687	156	5.791
Lead	0.010	13.000	0.310	125	1.166
Magnesium	3.700	150.000	87.468	156	36.443
Manganese	< 0.050	27.000	2.309	148	4.143
Mercury	< 0.001	< 0.010		126	
Nickel	0.010	0.200	0.074	96	0.057
Nitrate	< 0.100	165.000	6.421	141	14.798
pH	< 6.000	7.200	6.401	145	0.620
Phosphate	< 0.010	1.600	0.071	156	0.183
Selenium	< 0.010	< 0.100		126	
Silicon Dioxide	16.000	44.000	29.891	156	5.088
Silver	< 0.010	< 0.100	0.007	95	0.013
Sodium	66.000	450.000	188.891	156	59.068
Sulfate	150.000	1000.000	457.974	156	156.606
Zinc	0.010	13.000	0.583	124	1.332
Potassium	< 1.000	16.000	5.142	59	3.822
Lithium	< 0.100	0.100	0.007	30	0.025
Total Organic Carbon	2.900	292.000	43.424	111	57.976
Nitrite -N	< 0.010	150.000	5.158	52	21.622
Bromide	< 0.100	0.900	0.273	22	0.349
Chemical Oxygen Demand	< 1.000	85.000	17.607	30	16.697
Phenols	< 0.001	0.013	0.001	28	0.004
Kjeldahl N	< 0.100	8.800	2.143	60	1.812
Beryllium	< 0.020	2.500	0.612	8	0.884
Ortho Phosphate	< 0.100	1.000	0.044	54	0.149
Ammonia -N	< 0.100	5.300	0.468	38	0.933
Dissolved Organic Carbon	2.000	9.500	4.500	16	2.657
MBAS	< 0.010	< 0.010		6	
Total Coliform	< 10.000	250.000	81.429	7	91.911
Fecal Coliform	< 10.000	40.000	8.571	7	15.736

TABLE 1.2-4

DATA COLLECTION SCHEDULE FOR ALLUVIAL HOLES

Monthly

Water Levels Measured

February, July, November Plus Snowmelt-Flash Flood Seasons (April to Sept.)

Water Samples Analyzed For:

Alkalinity	Dissolved Solids	Silica
Ammonia	Fluoride	Sodium
Boron	Iron	Sulfate
Bicarbonate	Magnesium	Color
Calcium	Manganese	Odor
Carbonate	Kjeldahl Nitrogen	pH
Chloride	Nitrate plus Nitrite	Temperature
Conductance	Orthophosphate	
Dissolved Organic Carbon	Dissolved Phosphate	
	Potassium	

February, July, November

Water Samples Analyzed For:

DO	Ba	Ti	Cu
Bromide	Be	V	Pb
Cyanide	Bi	Zr	Li
BOD	Ge	Al	Mo
COD	Ga	As	Hg
Phenols	Ni	Cd	Se
Sulfide	Sr	Cr	Se
			Sr
			Zn

Radioactivity
- Gross Alpha
  - If >4 pci/l
    - then
      - RA 226,
      - Natural Uranium
- Gross Beta
  - If >100 pci/l
    - then
      - SR^{90}
      - Ce^{137}

July or August

Samples Analyzed For:

Fecal Coliform
Total Coliform
MBAS

levels during the quarter had a measured water level decline in the following four holes associated with Tract C-a: G-S S-7, G-S S-8, G-S S-11, G-S S-12. Alluvial holes G-S S-19 and G-S S-23 had increased water levels measured. Alluvial holes G-S S-22 and G-S S-24 had little changed water levels measured during the quarter. Water levels were not measured in December due to scheduling difficulties.

The eight alluvial holes associated with Tract C-a and 84 Mesa were sampled in February of this quarter according to schedule. Tables 1.2-5 and 1.2-6 are summaries of wet chemical and spectrographic analyses respectively. Table 1.2-7 presents the field data collected in November of the previous quarter and February of this quarter from the alluvial holes.

Water quality analyses of the February samples show that the water quality of the alluvial aquifers has remained relatively stable compared to previous analysis. An anomalous increase in specific conductivity values occurred for the sample from G-S S-8, however, the increase in total dissolved solids is within the expected range making the reading from conductivity suspect. A rise of 0.79, 1.0 and 6.64 mg/l in nitrogen above the mean from each hole was found for the samples from G-S S-22, G-S S-23, and G-S S-24 respectively; however, no reason for this occurrence could be correlated. Water quality results for each alluvial test hole can be found in the Raw Data portion of this report.

The remaining seven alluvial aquifer test holes were drilled to bedrock in the alluvium and were dry. Three of the dry alluvial test holes (G-S S-6, G-S S-13, and G-S S-14) were drilled as part of the monitoring of Tract C-a and have remained dry for the 2 years of baseline monitoring. The dry alluvial test holes (G-S S-15, G-S S-16, G-S S-17, and G-S S-18) were drilled in association with the proposed 84 Mesa disposal site and have remained dry during the monitoring to date.

1.2.3 ALLUVIAL AQUIFERS

The drilling and completion of 15 alluvial aquifer test holes associated with Tract C-a were described in RBOSP Progress Reports 2, 3, and 4. The holes which encountered water were: G-S S7, G-S S-8, G-S S-11, G-S S-12, G-S S-19, G-S S-22, G-S S-23, and G-S S-24. Figure 1.2-1 shows the location of all of the alluvial aquifer test holes.

Baseline data gathering of the wet alluvial aquifer test holes (G-S S-7, G-S S-8, G-S S-11, G-S S-12) associated with Tract C-a was completed in February 1977. This report will complete the reporting of this baseline data. The analysis of baseline data is reported in the Final Baseline Report. Future monitoring of these test holes will be reported in the Semi-Annual Interim Monitoring Reports.

Baseline data gathering of the wet alluvial aquifer test holes, G-S S-19, G-S S-22, G-S S-23, and G-S S-24, associated with the proposed processed shale disposal site on 84 Mesa will be completed in May 1977. This report presents the data collected for the December 1976 through February 1977 period.

Table 1.2-4 is a data collection schedule for the alluvial aquifers which were used for the alluvial test holes associated with Tract C-a and presently covers the four wet alluvial aquifer test holes associated with 84 Mesa. According to the schedule approved by the AOSS for the alluvial aquifer monitoring program, samples for standard chemical analysis should be collected in February, July, November, and monthly during the snowmelt flash flood season from April through September. The schedule also requires that all samples from the alluvial holes be filtered prior to laboratory analysis. This process is done in the field by means of a pressurized filtration unit.

Figures 1.2-17 through 1.2-24 are hydrogrpahs showing the depth to water of the alluvial aquifers for water year 1977. Water

SEDIMENT DISCHARGE
WATER YEAR 1975
CORRAL GULCH NEAR WEST LINE TRACT C-a

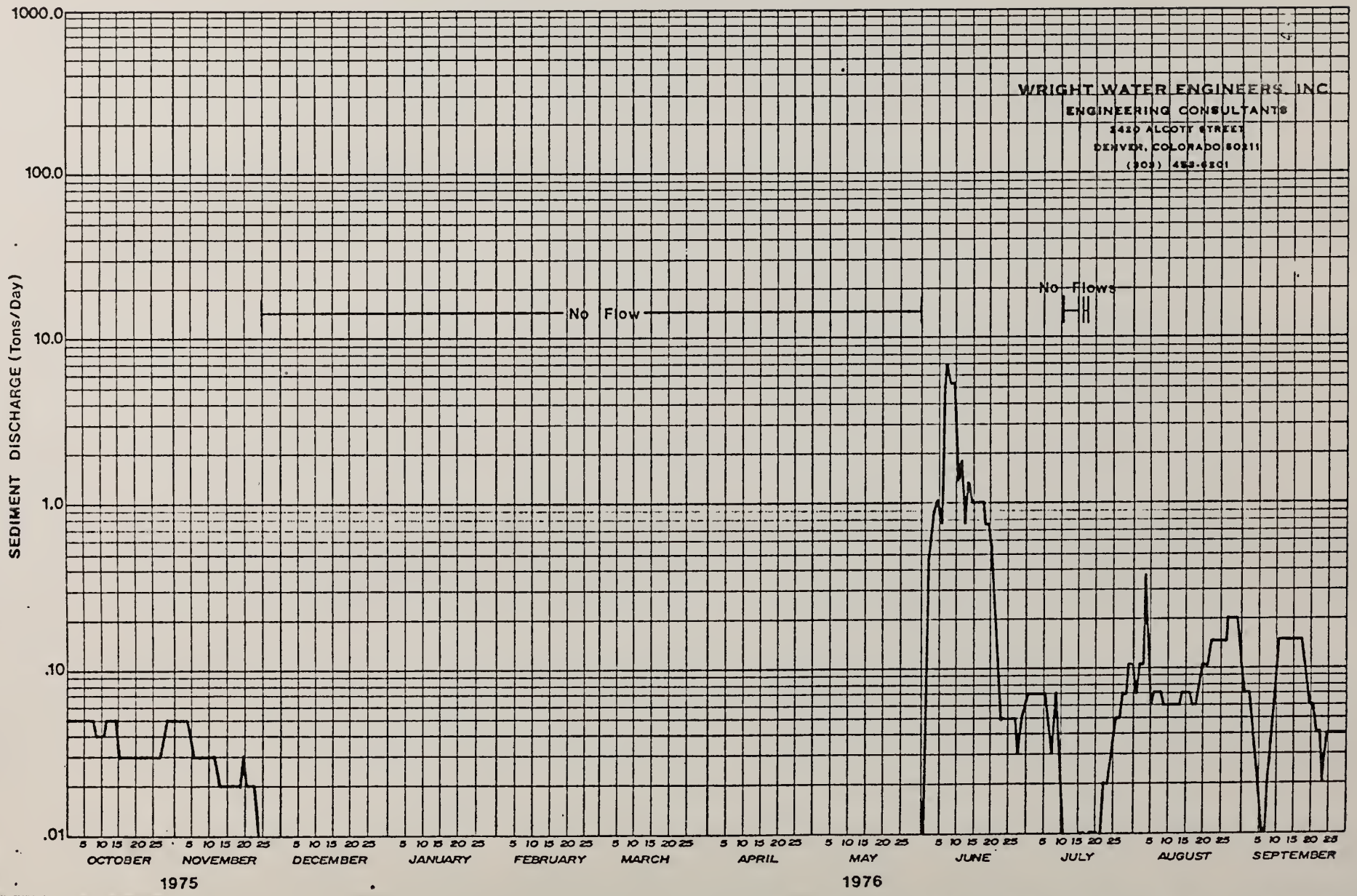


FIGURE 1.2-16

SEDIMENT DISCHARGE
WATER YEAR 1976
YELLOW CREEK NEAR WHITE RIVER, COLORADO

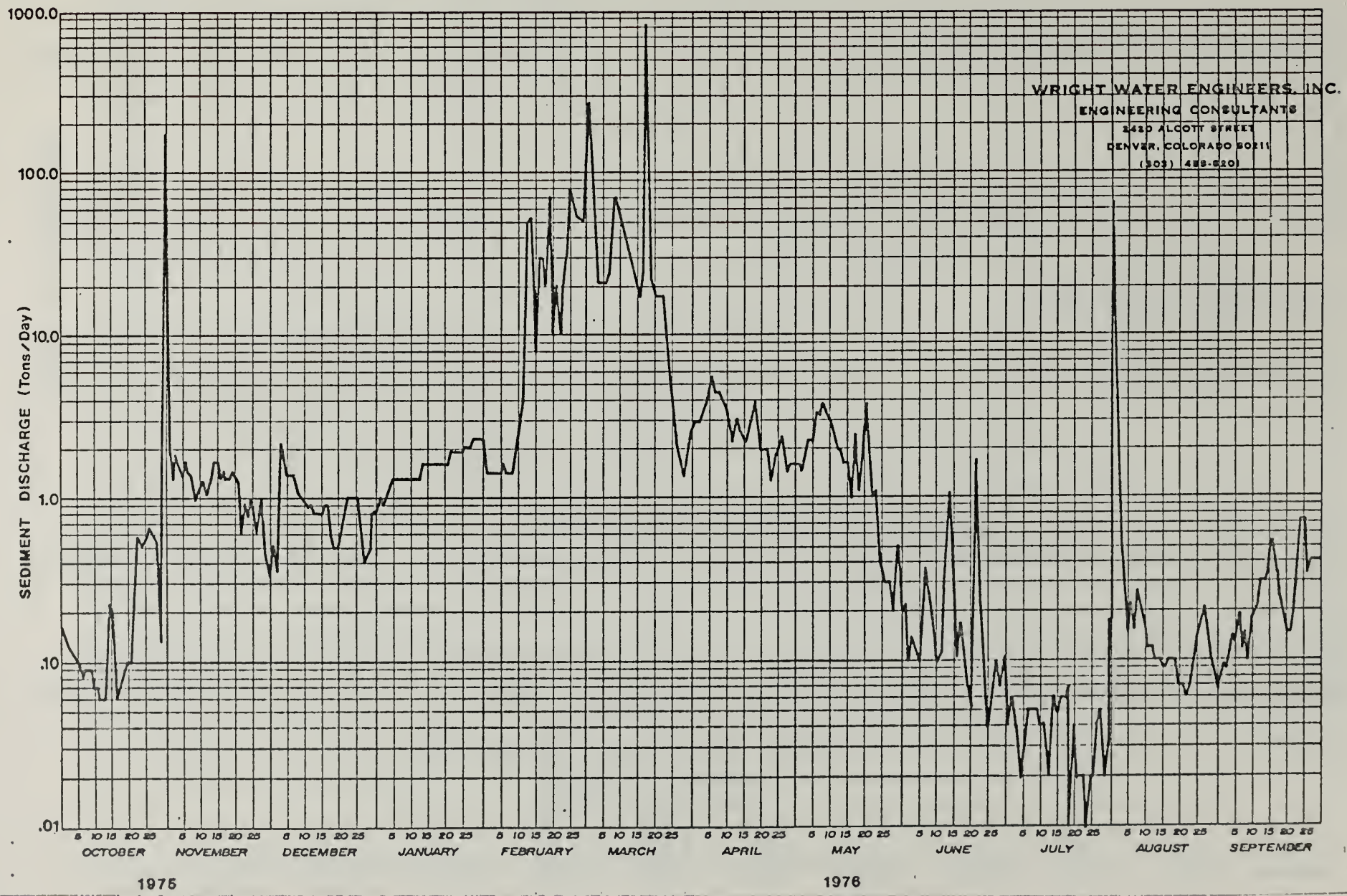


FIGURE 1.2-15

SEDIMENT DISCHARGE
WATER YEAR 1976
LOWER BIG DUCK CREEK NORTH OF 84 MESA

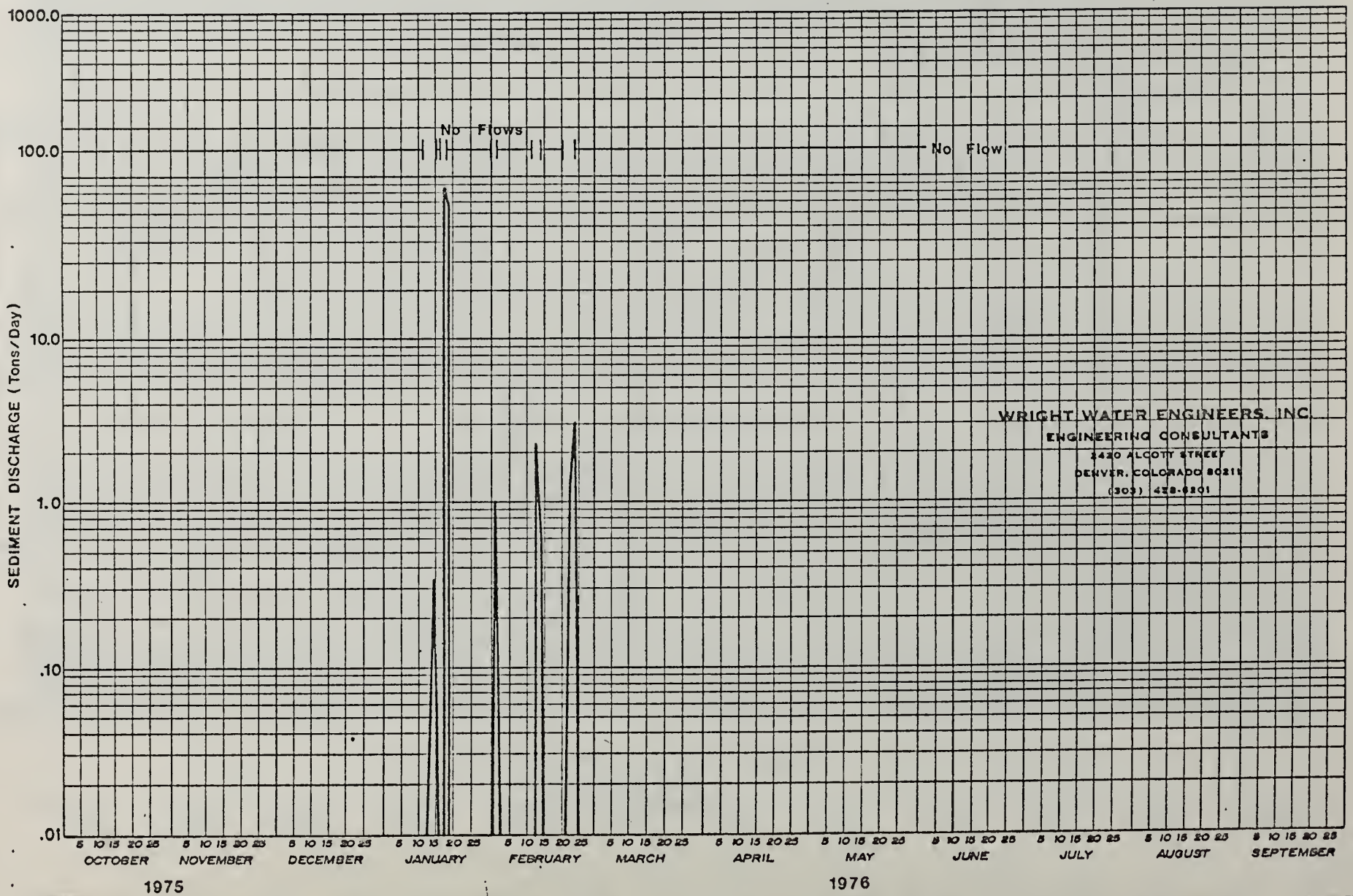


FIGURE 1.2-14

SEDIMENT DICHARGE
WATER YEAR 1976
UPPER BIG DUCK CREEK NORTH OF 84 MESA

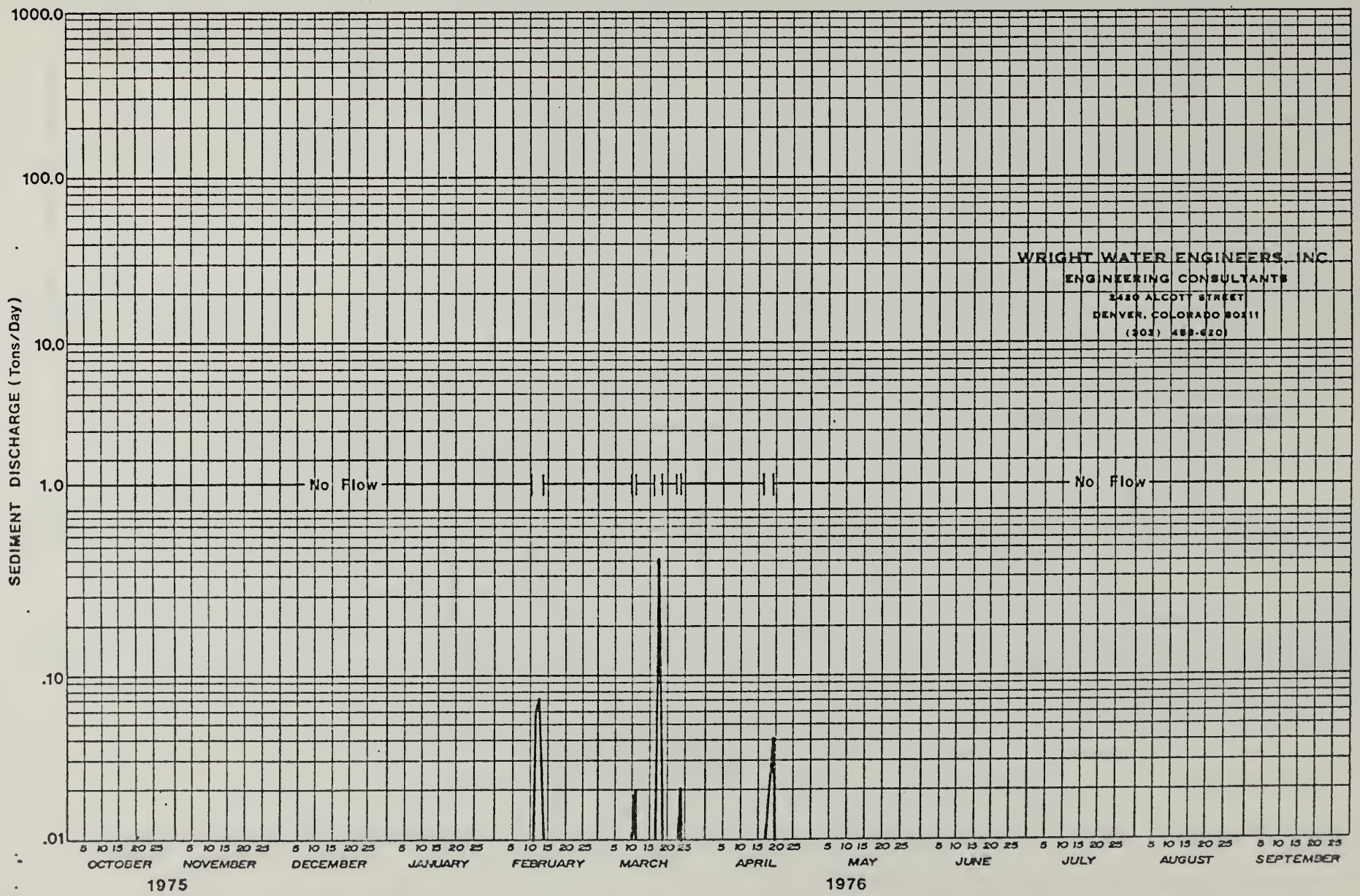


FIGURE 1.2-13

SEDIMENT DISCHARGE
WATER YEAR 1976
TRIBUTARY TO YELLOW CREEK EAST OF 84 MESA

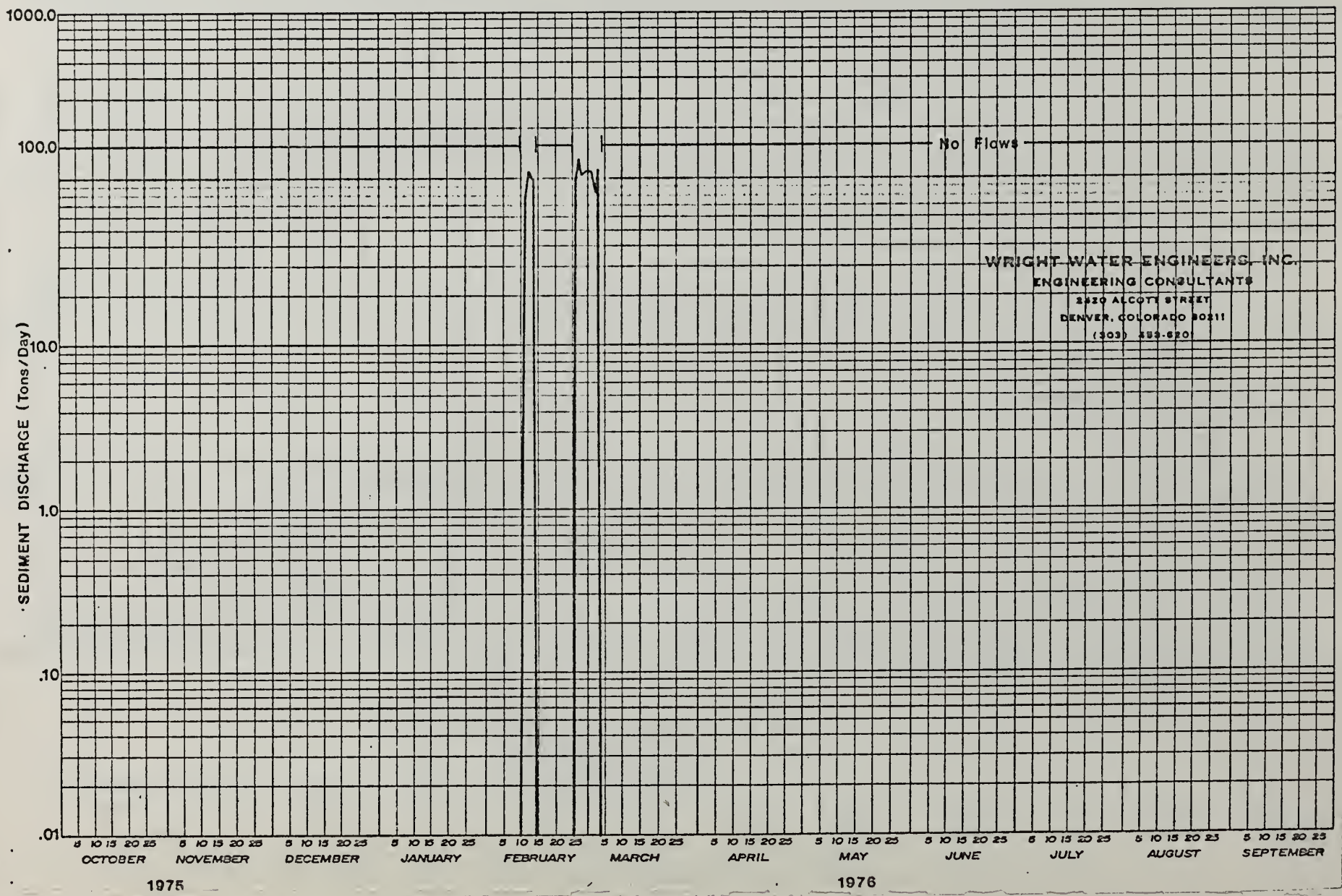


FIGURE 1.2-12

SEDIMENT DISCHARGE
WATER YEAR 1976
STAKE SPRINGS DRAW NEAR CONFLUENCE WITH CORRAL GULCH

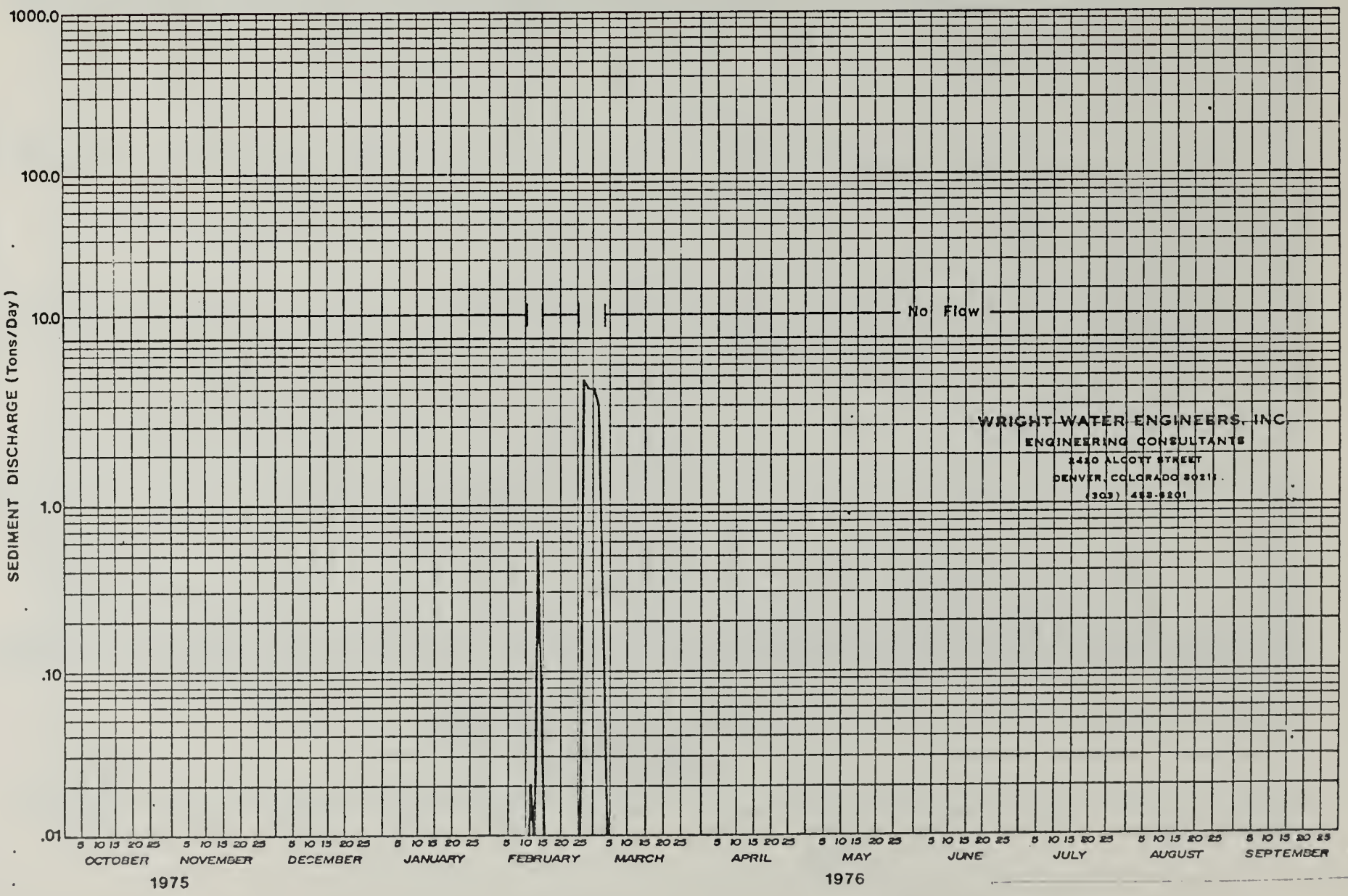


FIGURE 1.2-11

SEDIMENT DISCHARGE
WATER YEAR 1976
CORRAL GULCH SOUTH OF 84 MESA

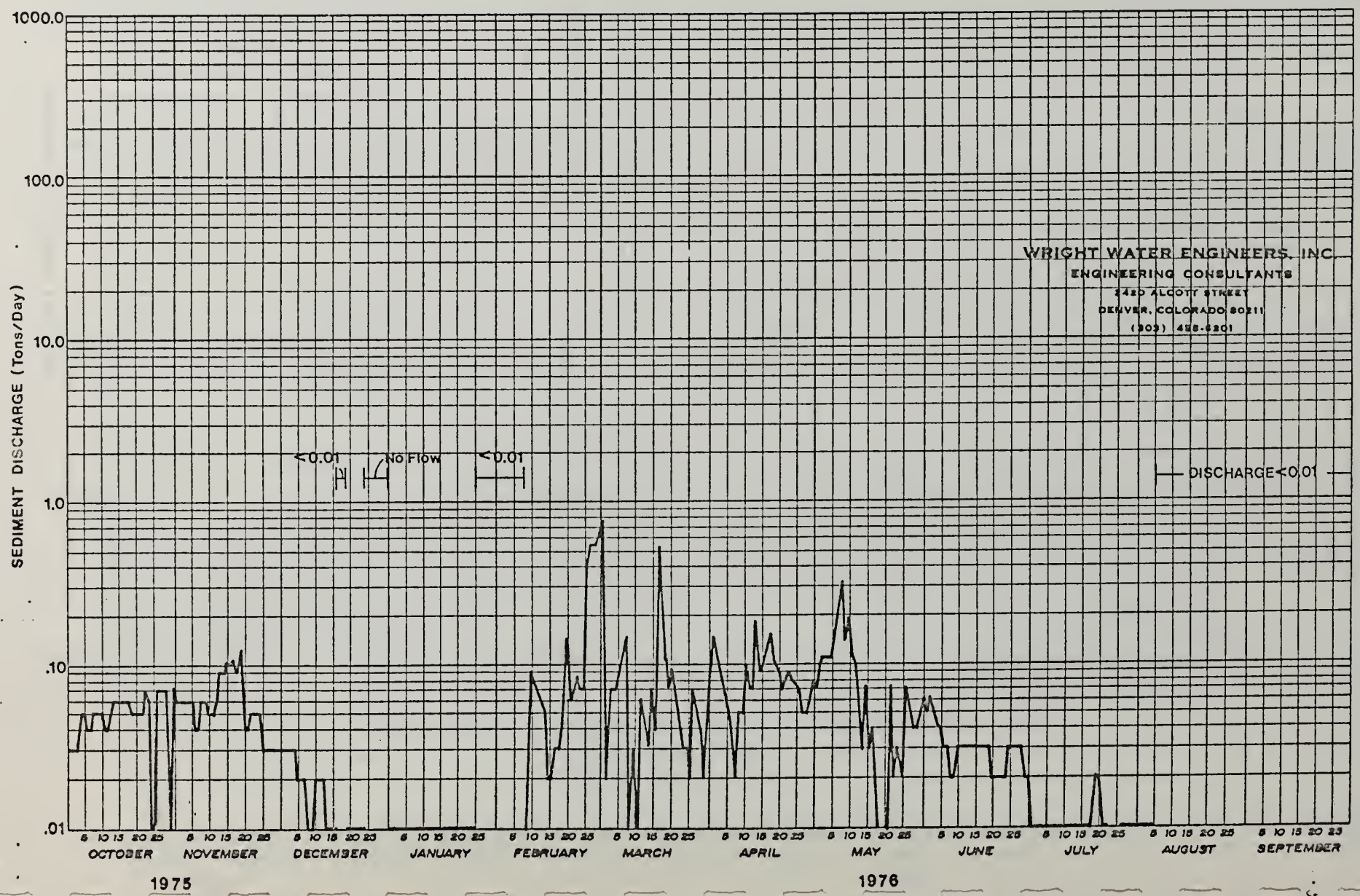
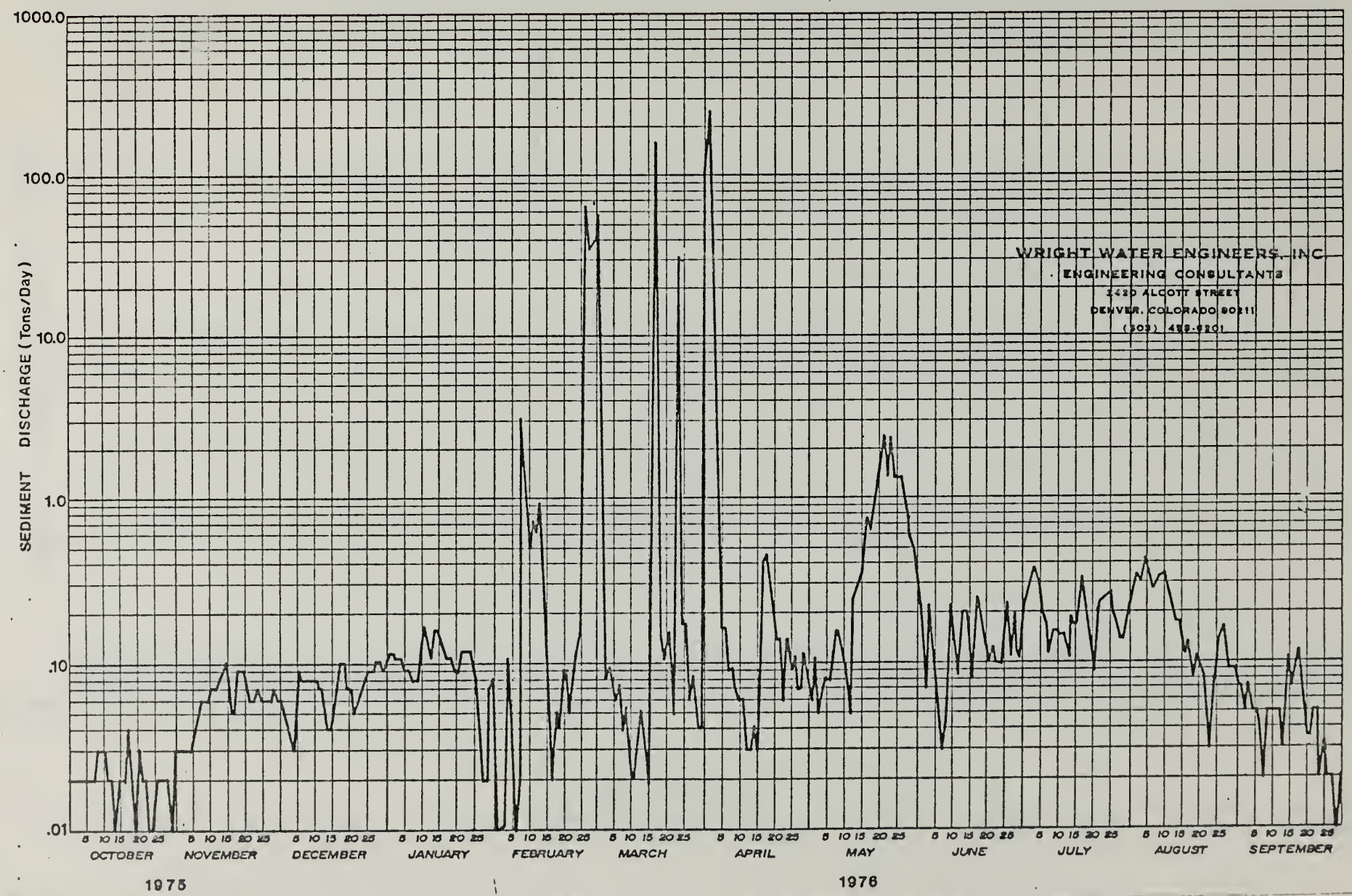


FIGURE 1.2-10

SEDIMENT DISCHARGE
WATER YEAR 1976
CORRAL GULCH EAST OF TRACT C-a



SEDIMENT DISCHARGE
WATER YEAR 1976
"RINKY DINK" NEAR EAST LINE TRACT C-a

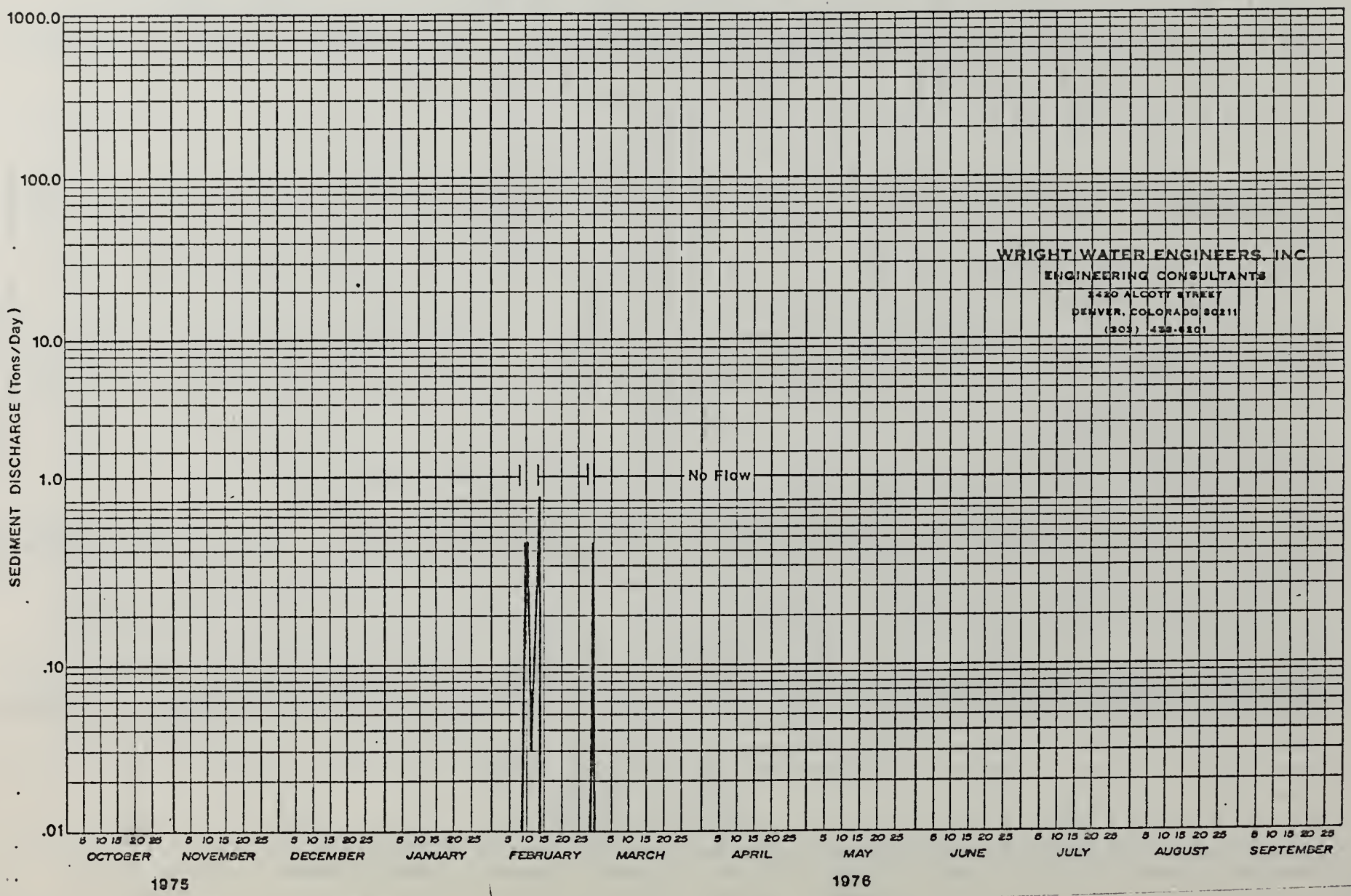


FIGURE 1.2-8

SEDIMENT DISCHARGE
WATER YEAR 1976
DRY FORK NEAR WEST LINE TRACT C-a

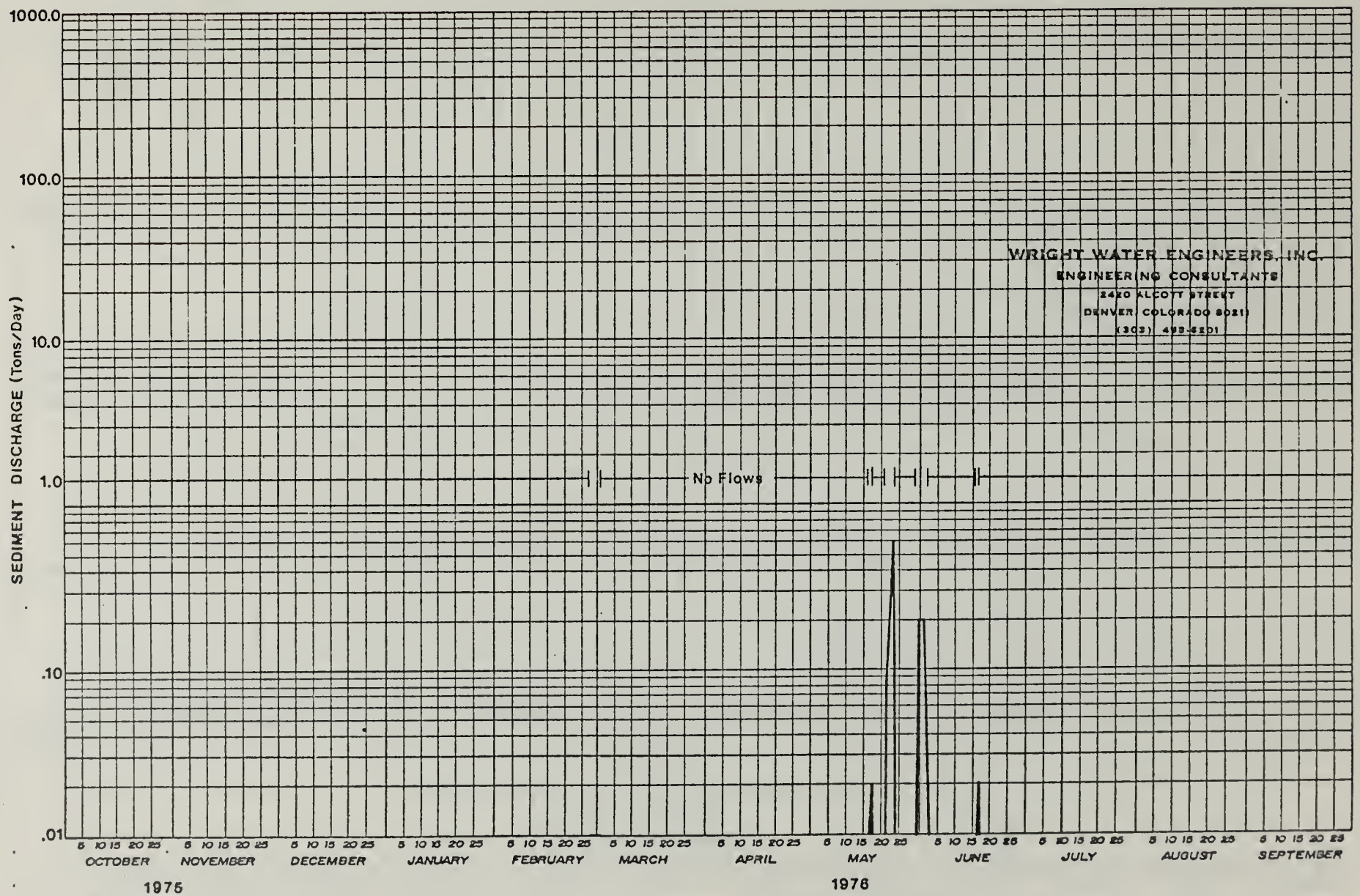


FIGURE 1.2-7

SEDIMENT DISCHARGE
WATER YEAR 1976
CORRAL GULCH NEAR WEST LINE TRACT C-a

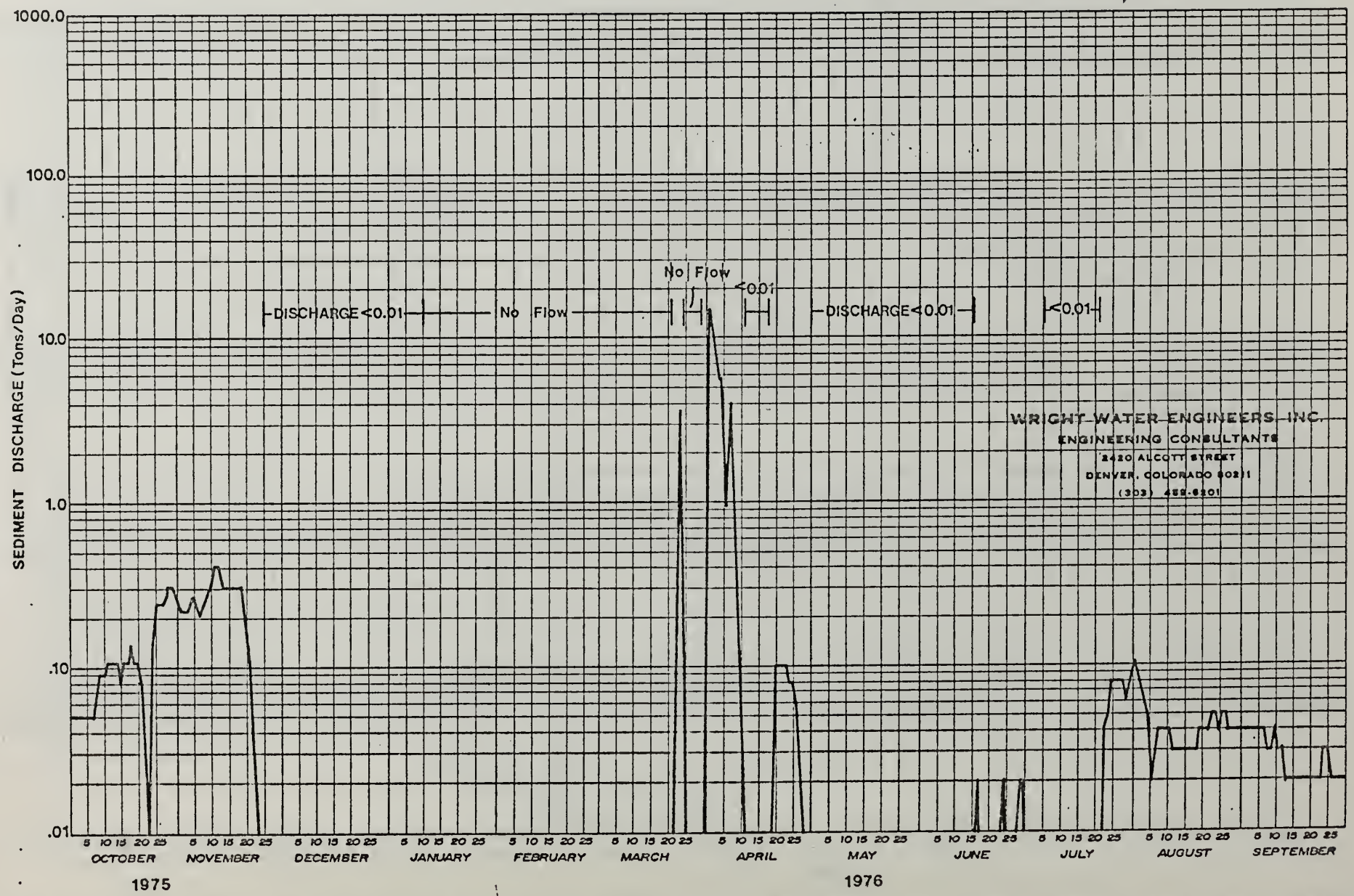


FIGURE 1.2-6

SEDIMENT DISCHARGE
WATER YEAR 1976
BOX ELDER NEAR WEST LINE TRACT C-a

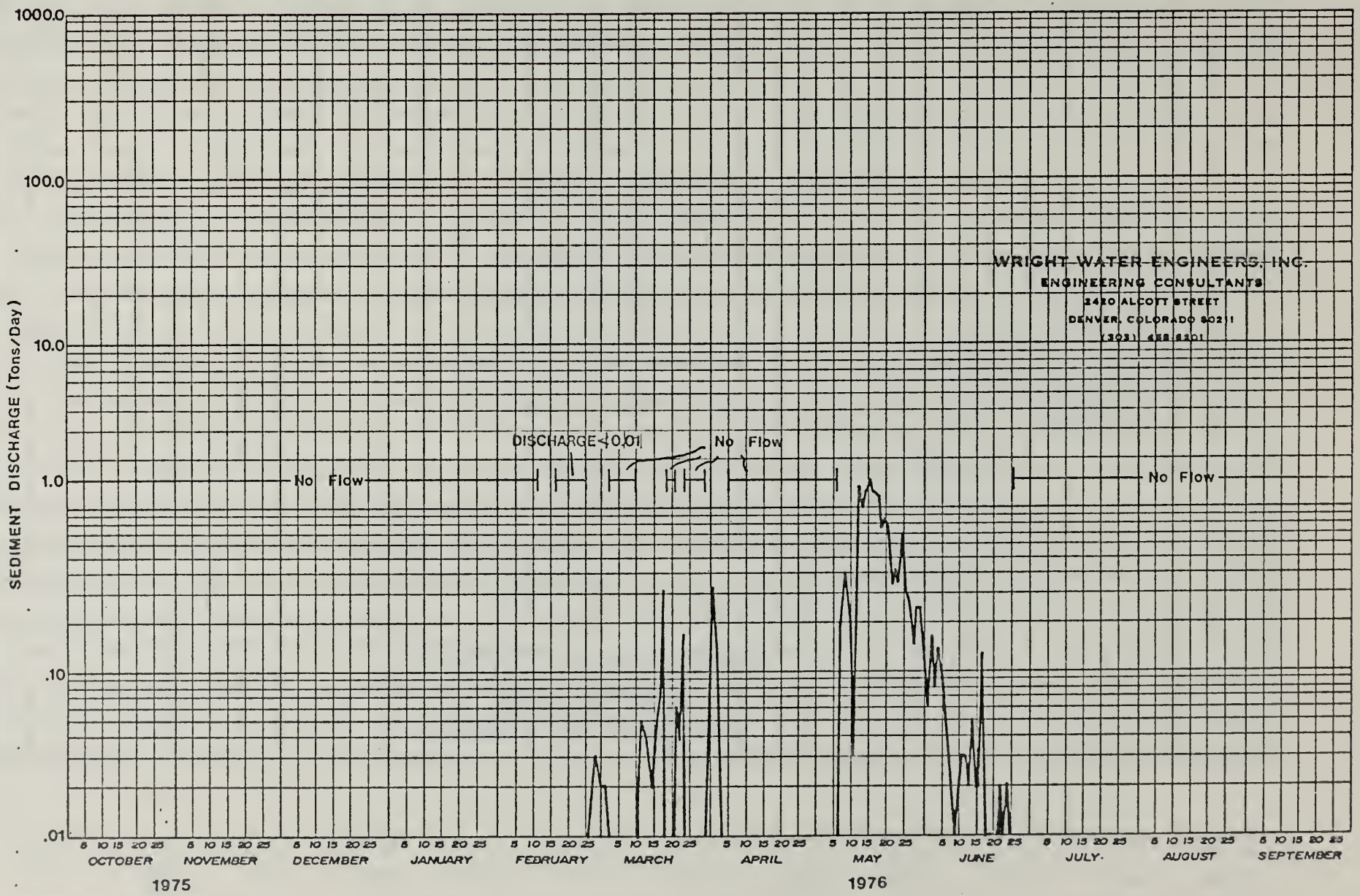
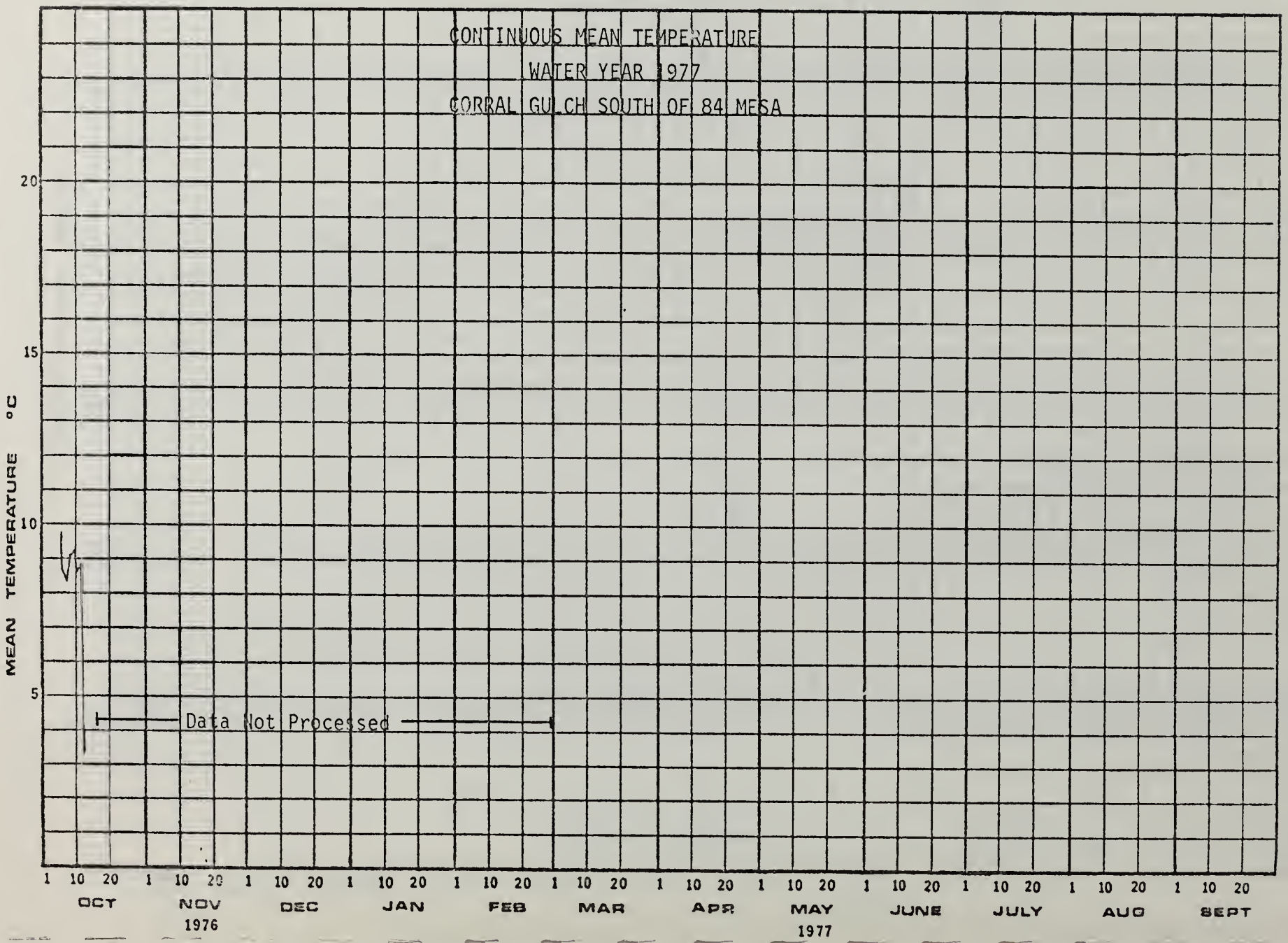


FIGURE 1.2-5


CONTINUOUS MEAN TEMPERATURE
WATER YEAR 1977
CORRAL GULCH SOUTH OF 84 MESA
MEAN TEMPERATURE °C
20
15
10
5
Data Not Processed
1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20
OCT
NOV
1976
DEC
JAN
FEB
MAR
APR
MAY
1977
JUNE
JULY
AUG
SEPT

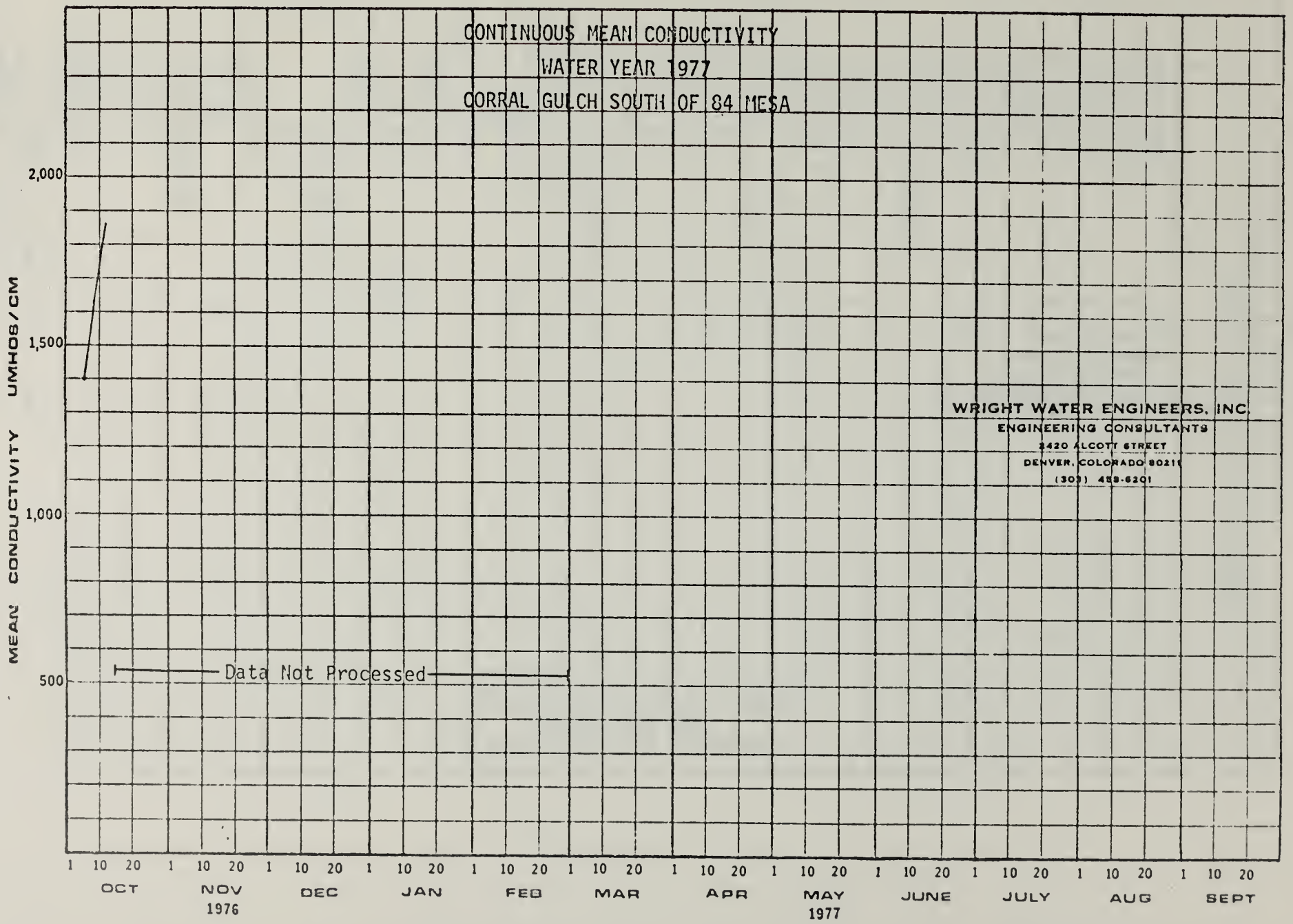

CONTINUOUS MEAN CONDUCTIVITY
WATER YEAR 1977
CORRAL GULCH SOUTH OF 84 MESA
MEAN CONDUCTIVITY UMHOS/CM
2,000
1,500
1,000
500
Data Not Processed
WRIGHT WATER ENGINEERS, INC.
ENGINEERING CONSULTANTS
2420 ALCOTT STREET
DENVER, COLORADO 80211
(303) 458-6201
1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20
OCT
NOV
1976
DEC
JAN
FEB
MAR
APR
MAY
1977
JUNE
JULY
AUG
SEPT

FIGURE 1.2-3

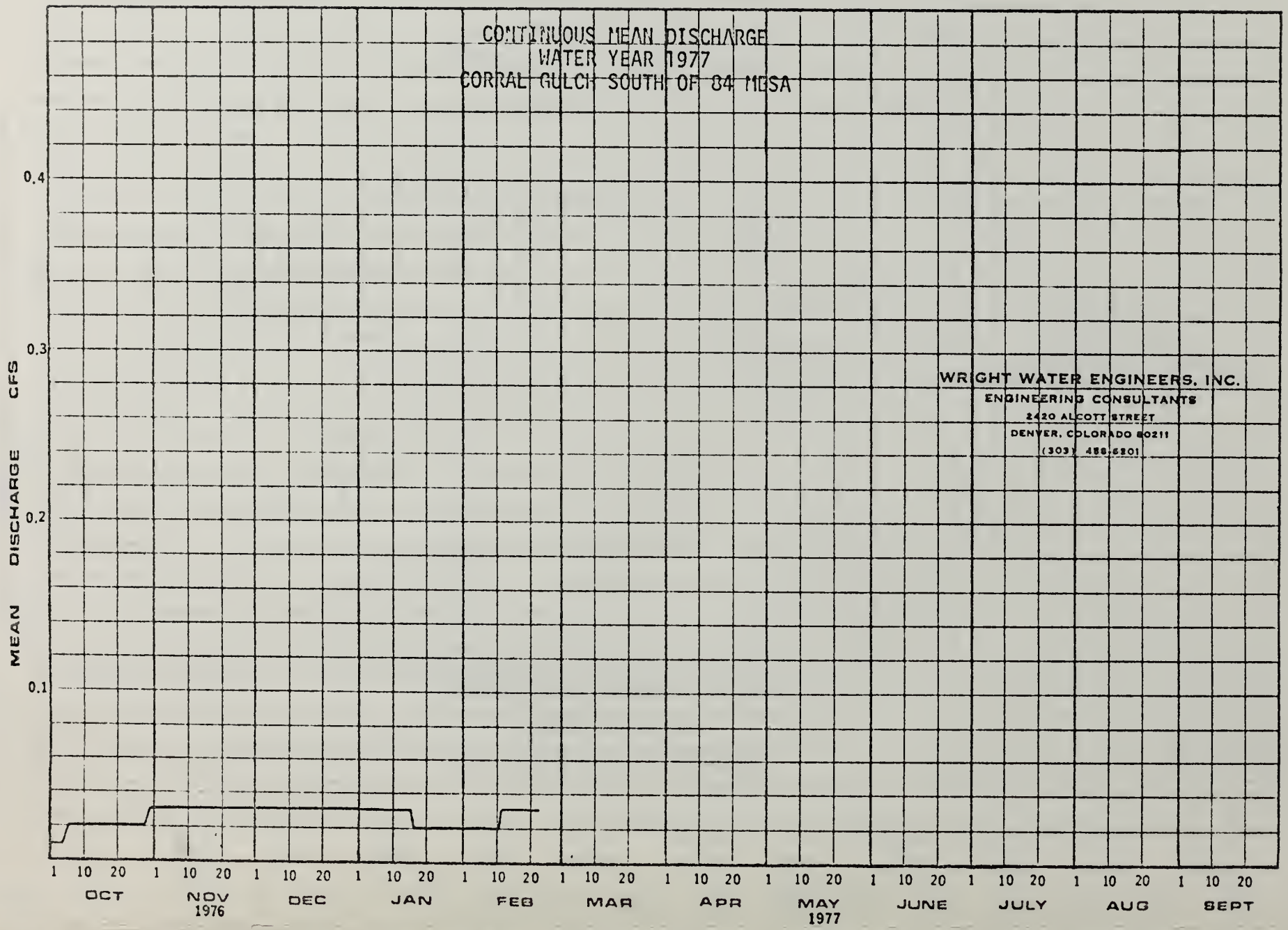

CONTINUOUS MEAN DISCHARGE
WATER YEAR 1977
CORRAL GULCH SOUTH OF 84 MESA
MEAN DISCHARGE CFS
0.4
0.3
0.2
0.1
WRIGHT WATER ENGINEERS, INC.
ENGINEERING CONSULTANTS
2420 ALCOTT STREET
DENVER, COLORADO 80211
(303) 458-6201
1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20 1 10 20
OCT
NOV
1976
DEC
JAN
FEB
MAR
APR
MAY
1977
JUNE
JULY
AUG
SEPT

FIGURE 1.2-2

TABLE 1.2-3
SUMMARY WATER ANALYSIS
WATER YEAR 1977
STREAM GAGING STATION, USGS 09306244
CORRAL GULCH SOUTH OF 84 MESA

Item	Oct. 13
Alkalinity (mg/l)	425
Aluminum (ug/l)*	
Ammonia (NH_4) (mg/l)	
Arsenic (ug/l)*	
Barium (ug/l)*	
Beryllium (ug/l)*	
Bicarbonate (mg/l)	518
Bismuth (ug/l)+	
BOD, 5-Day (mg/l)	
Boron (ug/l)	200
Bromide (mg/l)*	
Cadmium (ug/l)*	
Calcium (mg/l)	110
Carbonate (mg/l)	0
Chloride (mg/l)	20
Chromium (ug/l)*	
COD (mg/l)*	
Coliform, Fecal (Col/100 ml)*	
Coliform, Total (Col/100 ml)*	
Color (PCU)	4
Conductivity, Specific (umhos)	1850
Copper (ug/l)*	
Cyanide (mg/l)*	
Dissolved Oxygen (mg/l)	12.7
Fluoride (mg/l)	0.3
Gallium (ug/l)*	
Germanium (ug/l)*	
Hardness (Ca, Mg) (mg/l)	730
Iron (ug/l)*	
Kjeldahl Nitrogen (N) (mg/l)	0.29
Lead (ug/l)*	
Lithium (ug/l)*	
Magnesium (mg/l)	110
Manganese (ug/l)*	
MBAS (mg/l)*	
Mercury (ug/l)*	
Molybdenum (ug/l)	
Nickel (ug/l)*	
Nitrate (NO_3) (mg/l)	
Nitrogen - Nitrite as N (mg/l)	
Nitrite Plus Nitrate (N)(mg/l)	0.02
Nitrogen, Ammonia (mg/l)	
Nitrogen, Organic (mg/l)	
Odor (severity)	1
Oil and Grease (mg/l)*	
Organic Carbon (mg/l)	
Dissolved	6.7
Suspended	0.1
Total +	
Pesticides (ug/l) +	
pH	8.4
Phenols (mg/l)*	
Phosphate (mg/l)	
Dissolved (PO_4)	
Ortho (P)	0.02
Total (PO_4)	0.03
Potassium (mg/l)	2.3
Radioactivity*	
Gross Alpha (pc/l)[1]	
Radium 226 (pc/l)	
Natural Uranium (ug/l)	
Gross Beta (pc/l)	
SR^{90} (pc/l)	
CE^{137} (pc/l)	
Selenium (ug/l)	
Silica (SiO_2) (mg/l)	22
Silver (ug/l) +	
Sodium (mg/l)	190
Sodium Adsorption Ratio	3.1
Solids, Dissolved (mg/l)	
Strontium (ug/l)*	
Sulfate (mg/l)	580
Sulfide (mg/l)*	
Temperature (°C)*	7.5
Tin (ug/l)+	
Titanium (ug/l)	
Turbidity (JTU)	0.60
Vanadium (ug/l) *	
Zinc (ug/l)*	
Zirconium (ug/l) *	

* Quarterly or special sampling only
\+ Required during first year baseline only
1 U Nat as reference

TABLE 1.2-2

DATA COLLECTION SCHEDULE FOR STREAM GAGING STATIONS

Continuously or Automatically

- Flow Rate
- Sediment Discharge
- Temperature
- Specific Conductance

Periodically

- Storage Rain Gages
- Recording Rain Gages
- Rainfall Intensity Gages

Monthly

Water Samples Analyzed For:

- Alkalinity
- Biological Oxygen Demand
- Dissolved Organic Carbon
- Boron
- Calcium
- Conductance
- Fluoride
- Magnesium
- Potassium
- Silica
- Sodium
- Sulfate
- Ammonia
- Bicarbonate
- Carbonate
- Chloride
- Color
- Dissolved Solids
- Kjeldahl Nitrogen
- Nitrate plus Nitrite
- Odor
- Dissolved Phosphate
- Turbidity
- Dissolved Oxygen
- pH
- Temperature
- Total Phosphate
- Ortho Phosphate
- Suspended Organic Carbon

Quarterly

Sample and Analyze:

- COD
- Fecal Coliform
- Total Coliform
- Bromide
- Cyanide
- MBAS
- Oil & Grease
- Phenols
- Sulfide
- Radioactivity
  - Gross Alpha
    - if > 4 pci/l
    - then Ra^{226}, Natural Uranium
  - Gross Beta
    - if >100 pci/l
    - then Sr^{90}, Ce^{137},
- Ba
- Be
- Ge
- Ga
- Ni
- Ti
- V
- Zr
- Al
- As
- Cd
- Cr
- Cu
- Fe
- Pb
- Li
- Mn
- Mo
- Hg
- Se
- Sr
- Zn

Flow was monitored for the entire reporting period at the Corral Gulch south of 84 Mesa location. Flow during this period averaged 0.03 cubic feet per second (cfs) of discharge. Figure 1.2-2 is a plot of the continuous mean discharge. Continuous mean conductivity and continuous mean temperature data have not at this time been entirely processed by the USGS from the complete reporting period.

Figures 1.2-3 and 1.2-4 are graphs of available continuous mean conductivity and mean temperature. The amount of data is insufficient for analysis at the present time for this Corral Gulch Station.

Due to scheduling problems in the water sampling procedures, only one water sample was collected for the reporting period at the Corral Gulch south of 84 Mesa. Table 1.2-3 presents the results of this analysis

Figures 1.2-5 through 1.2-15 are plots of sediment discharge for water year 1976 for all eleven of the surface water gaging stations. Figure 1.2-16 is a plot of sediment discharge for water year 1975 from the Corral Gulch near west line Tract C-a. Other sediment data have previously been presented in Progress Report 5.

Additional water quality results from three surface stream gaging stations, which have not been previously published, are presented in the Raw Data volume of this report. The new data are for August 29, 1975 for Yellow Creek near White River, Colorado, September 10, 1975 for Lower Big Duck Creek north of 84 Mesa, and August 27, 1975 for Corral Gulch south of 84 Mesa.

1.2.2 SURFACE WATER DATA COLLECTION

The 2 year baseline data collection for Tract C-a from the seven associated stream gaging stations and the six rain gaging stations has been completed and the additional studies are supported in the Semi-Annual Report. Surface water data collection for baseline data is presently being conducted only for the four stream gaging stations associated with the proposed processed shale disposal site on 84 Mesa. With the exception of sediment data and the results of the previously unpublished water quality results (which will be presented in this Progress Report), the data for the seven stream gaging stations associated with Tract C-a have been reported in Progress Reports 2 through 9. The results of further analyses of the data have been reported in the Final Baseline Report for Tract C-a, while additional analyses of the data is contained in the Appendices of this Progress Report.

Baseline data collection for the following four stream gaging stations associated with 84 Mesa will continue through May 1977: Upper Big Duck Creek north of 84 Mesa, Lower Big Duck Creek north of 84 Mesa, Unnamed Tributary to Yellow Creek east of 84 Mesa, and Corral Gulch south of 84 Mesa. Table 1.2-2 is the data collection schedule for the four stream gaging stations.

This Progress Report is intended to cover the reporting period December 1976 through February 1977; however, a lag time in USGS data processing does not allow data presented in each progress report to cover the entire reporting period. The period of time covered by each set of surface water data will also vary because of variability in USGS data processing time. The surface water data presented in this report are from new data made available since the last progress report.

Three of the four stream gaging stations for 84 Mesa did not have flow during the reporting period. These three are Upper Big Duck Creek north of 84 Mesa, Lower Big Duck Creek north of 84 Mesa, and Unnamed Tributary to Yellow Creek east of 84 Mesa.

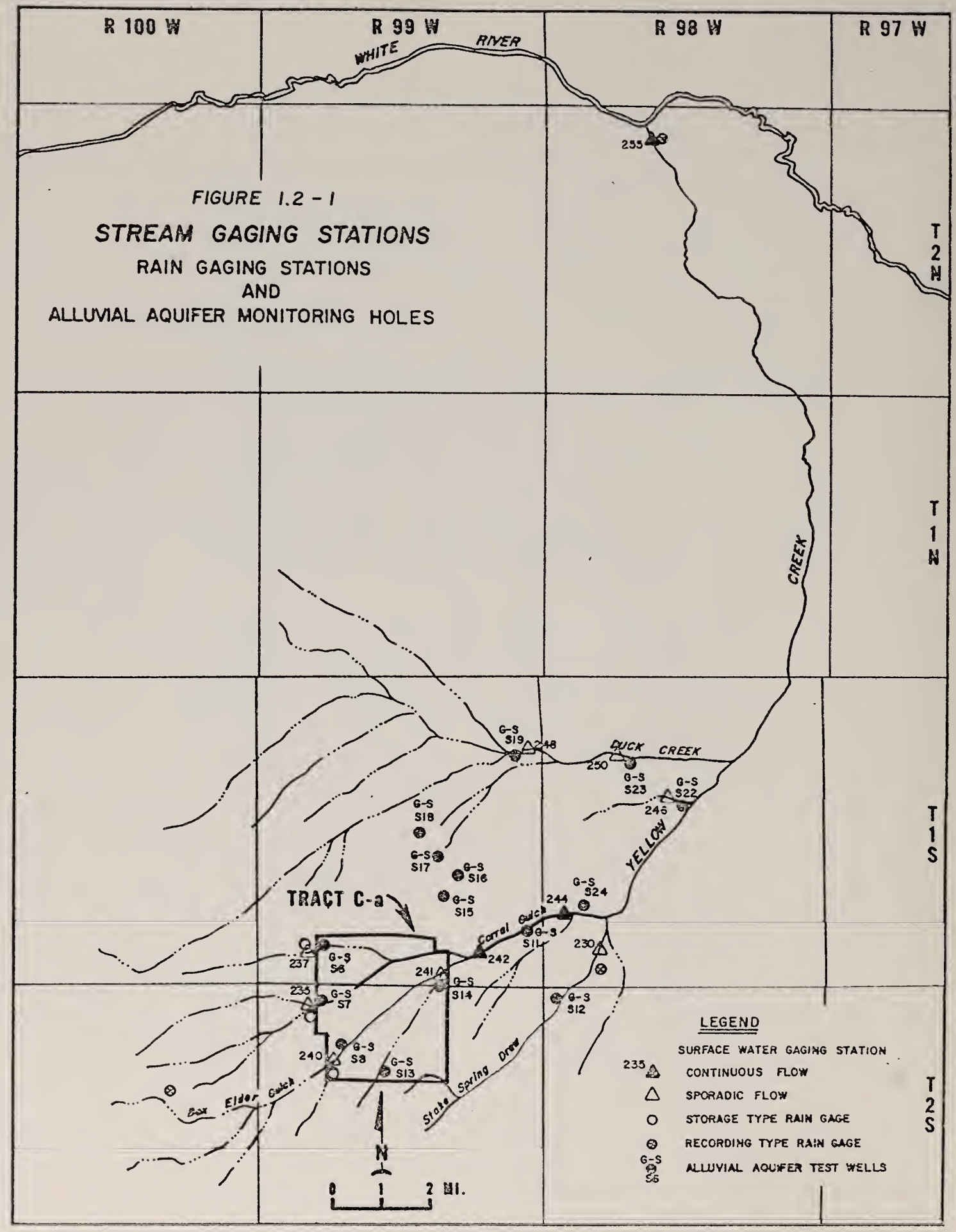


FIGURE 1.2 - 1

STREAM GAGING STATIONS
RAIN GAGING STATIONS
AND
ALLUVIAL AQUIFER MONITORING HOLES

TABLE 1.2-1

LOCATION AND USGS IDENTIFICATION NUMBERS
FOR STREAM AND RAIN GAGING STATIONS

USGS Identification Number	LOCATION
09306237	Dry Fork near west line Tract C-a
09306235	Corral Gulch near west line Tract C-a
09306240	Box Elder Gulch near west line Tract C-a
09306242	Corral Gulch east of Tract C-a
09306230	Stake Springs Draw near confluence with Corral Gulch
09306255	Yellow Creek near White River, Colorado
09306241	Rinky Dink Gulch near east line Tract C-a
09306248	Upper Big Duck Creek north of 84 Mesa
09306250	Lower Big Duck Creek north of 84 Mesa
09306246	Tributary to Yellow Creek east of 84 Mesa
09306244	Corral Gulch south of 84 Mesa (near 84 Ranch)
	STORAGE-TYPE RAIN GAGES
09306235	Corral Gulch near west line Tract C-a
09306237	Dry Fork near west line Tract C-a
09306240	Box Elder Gulch near west line Tract C-a
	RAINFALL INTENSITY AND RECORDING RAIN GAGES
09306230	Stake Springs Draw near confluence with Corral Gulch
09306255	Yellow Creek near White River, Colorado
No number	Cathedral Bluffs located in NW¼, NW¼, Sec.14 T2S, R100W

1.2.1 SURFACE WATER MONITORING STATIONS

RBOSP has contracted with the Colorado River Water Conservation District to have the Water Resources Division of the USGS construct and monitor a total of eleven stream gaging stations and six rain gaging stations on or near Tract C-a. RBOSP Progress Reports 2, 3, and 5 described the operation of these monitoring stations. Of the eleven stream gaging stations, seven monitor all significant drainages associated with Tract C-a, while the remaining four stations monitor stream flow associated with the proposed shale disposal site on 84 Mesa. The three storage-type rain gaging stations are located on Dry Fork, on Box Elder Gulch, and on Corral Gulch near the west line of Tract C-a. Rainfall intensity and recording-type rain gaging stations are located near the drainage divide of Cathedral Bluffs, on Stake Springs Draw near the confluence with Corral Gulch, and on Yellow Creek near White River, Colorado.

Table 1.2-1 gives the USGS identification numbers and locations of the eleven stream gaging stations and the six rain gaging stations.

- Progress Report 8 - Contains data and the interpretation for the eighth quarterly period, June through August 1976;
- Progress Report 9 - Contains data and interpreation for the ninth quarterly period, September through November 1976.

The hydrologic program began in the spring of 1974. These data have been used in both environmental and engineering studies. Analyses of the water quality data to date indicate that the water will be of sufficient quality to be used in mining and processing related to oil shale development.

1.2 HYDROLOGIC PROGRAM

The purpose of the surface and subsurface hydrologic baseline program being conducted on Tract C-a for the Rio Blanco Oil Shale Project (RBOSP) is to establish baseline data. These data include: precipitation, stream flows and quality, alluvial aquifer monitoring and water quality analyses, and deep oil shale aquifer monitoring and water quality analyses.

RBOSP Progress Report 10 submits to the AOSS the hydrologic data gathered or received during the period December 1976 through February 1977 and interpretations of hydrologic baseline data for Tract C-a. This hydrologic report is submitted in three parts: the Interpretive Text, the Raw Data, and the Appendix. In the Interpretive Text, the text, tables, and figures are the result of the data gathering program. The Raw Data part contains the actual data, most of which is in a computer printout form. The Appendix portion contains the back-up for the Final Baseline Report. This back-up allows the reader of the Final Baseline Report to study in detail the analysis, methods of analysis and additional conclusions summarized in that report.

The following is a brief summary of the previous Quarterly Reports:

- Progress Report 2 - Contains data from the drilling program;
- Progress Report 3 - Contains data obtained during the formal pumping tests;
- Progress Report 4 - Contains a detailed hydrologic evaluation of the data available through October 15, 1975;
- Progress Report 5 - Summarizes the annual hydrologic data for water year 1975;
- Progress Report 6 - Contains data and the interpretation for the sixth quarterly period, December through February 1976;
- Progress Report 7 - Contains data and the interpretation for the seventh quarterly period, March through May 1976;

INDEX OF DATA
FOR RIO BLANCO OIL SHALE PROGRESS REPORTS 2-9
HYDROLOGIC PROGRAM SECTION 1.2

ALLUVIAL AQUIFER DATA

Test Hole	Drilling	Water Level	Water Quality: Field Data pH, Cond., Temp.	Water Quality: Lab. Analysis	Summary
S-6*					
S-7	R2A	R3, R4, R5, R6, R7, R8, R9	R3, R4, R5, R6, R7, R8, R9	R3V1, R4V, R5V, R6V, R7V, R8V, R9V	R3, R4, R5, R6, R7, R8, R9
S-8	R2A	R3, R4, R5, R6, R7, R8, R9	R3, R4, R5, R6, R7, R8, R9	R3V1, R4V, R5V, R6V, R7V, R8V, R9V	R3, R4, R5, R6, R7, R8, R9
S-11	R2A	R3, R4, R5, R6, R7, R8, R9	R3, R4, R5, R6, R7, R8, R9	R3V1, R4V, R5V, R6V, R7V, R8V, R9V	R3, R4, R5, R6, R7, R8, R9
S-12	R2A	R3, R4, R5, R6, R7, R8, R9	R3, R4, R5, R6, R7, R8, R9	R3V1, R4V, R5V, R6V, R7V, R8V, R9V	R3, R4, R5, R6, R7, R8, R9
S-13*	R2A				
S-14*	R2A				
S-15*	R4A				
S-16*	R4A				
S-17*	R4A				
S-18*	R4A				
S-19	R4A	R4, R5, R6, R7, R8, R9	R4, R5, R6, R7, R8, R9	R4V, R5V, R6V, R7V, R8V, R9V	R4, R5, R6, R7, R8, R9
S-22	R4A	R4, R5, R6, R7, R8, R9	R4, R5, R6, R7, R8, R9	R4V, R5V, R6V, R7V, R8V, R9V	R4, R5, R6, R7, R8, R9
S-23	R4A	R4, R5, R6, R7, R8, R9	R4, R5, R6, R7, R8, R9	R4V, R5V, R6V, R7V, R8V, R9V	R4, R5, R6, R7, R8, R9
S-24	R4A	R4, R5, R6, R7, R8, R9	R4, R5, R6, R7, R8, R9	R4V, R5V, R6V, R7V, R8V, R9V	R4, R5, R6, R7, R8, R9

* The test holes that are not referenced are dry: See Text R3, R4, R5, R6, R7, R8, and R9.

INDEX OF DATA FOR RIO BLANCO OIL SHALE PROGRESS REPORTS 2-9
HYDROLOGIC PROGRAM, SECTION 1.2

DEEP AQUIFER PROGRAM DATA

	COMPLETIONS		GEOHYDROLOGIC DATA				
			AQUIFER		DRILLING		
					Geophysical		
TEST HOLE	Test Hole Cross Sections	Pump Installations	Hydrologic Cross Section	Aquifer Thickness Maps	Water Velocity, Water Movement & Temp. vs. Depth	Water Production	Informal Recovery Tests
AM-2A	R2A		R2	R4			
AM-3	R2A		R2	R4			
AM-4	R2A		R2	R4			
CE-701	R2A	R3	R2	R4			
CE-702	R2A		R2	R4			
CE-703	R2A			R4			
CE-705A	R2A	R3	R2	R4			
CE-707	R2A		R2	R4			
CE-708	R2A		R3	R4			
CE-709	R2A		R3	R4			
G-S 1	R2A		R2	R4	R2A	R2A	R2A
G-S 2-3	R2A		R2	R4	R2A	R2A	R2A
G-S 4-5	R2A	R3	R2	R4	R2A	R2A	R2A
G-S 6	R2A		R2	R4	R2A	R2A	R2A
G-S 7	R2A		R2	R4	R2A	R2A	R2A
G-S 8	R2A		R2	R4	R2A	R2A	R2A
G-S 9	R2A		R2	R4	R2A	R2A	R2A
G-S 10	R2A		R2	R4	R2A	R2A	R2A
G-S 11	R2A		R2	R4	R2A	R2A	R2A
G-S 12	R2A	R3	R2	R4	R2A	R2A	R2A
G-S 13	R2A		R2	R4	R2A	R2A	R2A
G-S 14	R2A		R2	R4	R2A	R2A	R2A
G-S 15	R2A		R2	R4	R2A	R2A	R2A
G-S D16	R2A	R3	R2	R4		R2A	
G-S D17	R2A	R3	R2	R4		R2A	
G-S D18	R2A	R3	R2	R4		R2A	
G-S D19	R2A	R3	R2	R4		R2A	
G-S M1	R2A		R2	R4	R2A	R2A	R2A
G-S M2	R2A				R2A	R2A	R2A
G-S M3	R2A				R2A	R2A	R2A
G-S M4	R2A				R2A	R2A	R2A
G-S M5	R4					R4	
TO 1	R2A		R2	R4			
TO 2	R2A		R2	R4			
TO 3	R2A		R2	R4			

INDEX OF DATA FOR RIO BLANCO OIL SHALE PROGRESS REPORTS 2-9
HYDROLOGIC PROGRAM, SECTION 1.2

DEEP AQUIFER PROGRAM DATA

	GEOHYDROLOGIC DATA						
	PUMPING TESTS				MONITORING PROGRAM		
TEST HOLE	WATER LEVEL DRAWDOWN DATA	SEMI-LOG DRAWDOWN PLOTS	TRANSMISSIVITY AND STORAGE COEF.	TRANSMISSIVITY AND PERMEABILITY MAPS	WATER LEVELS	HYDROGRAPHS	PIEZOMETRIC SURFACE MAPS
AM-2A	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
AM-3	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
AM-4							
CE-701	R3V3	R3A			R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
CE-702	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
CE-703							
CE-705A	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A	R4, R5, R6, R7, R8, R9
CE-707	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
CE-708	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
CE-709	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S 1	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S 2-3	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S 4-5	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S 6	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S 7							
G-S 8	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7
G-S 9	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S 10	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S 11	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S 12	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R4, R6, R7, R8, R9
G-S 13	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S 14							
G-S 15	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S D16	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A	R4
G-S D17	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A	R4
G-S D18	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A	R4
G-S D19	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A	R4
G-S M1	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
G-S M2	R3V3	R3A	R3		R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	
G-S M3	R3V3	R3A	R3		R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	
G-S M4	R3V3	R3A	R3		R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	
G-S M5							
TO 1	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
TO 2	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A, R4A	R4, R5, R6, R7, R8, R9
TO 3	R3V3	R3A	R3	R4	R3V2, R7, R7V, R8, R8V, R9, R9V	R3A	R4

INDEX OF DATA FOR RIO BLANCO OIL SHALE PROGRESS REPORTS 2-9
HYDROLOGIC PROGRAM, SECTION 1.2

DEEP AQUIFER PROGRAM DATA

	DRILLING		PUMPING TEST		WATER QUALITY MONITORING		
TEST HOLE	FIELD ANALYSIS COND., pH, TEMP.	LAB ANAYLSIS	FIELD ANALYSIS COND.,pH, TEMP.	LAB ANALYSIS	LAB ANALYSIS	SUMMARY OF LAB ANALYSIS	CHEMICAL CONSTITUENT DISTRIBUTION MAPS
AM-2A		R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
AM-3		R3V1			R3V1, R4Va, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
AM-4		R3V1					R4, R4V
CE-701		R3V1				R3, R4, R5, R7, R8, R9	R4, R4V
CE-702		R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
CE-703		R3V1				R3, R4, R4, R7, R8, R9	R4, R4V
CE-705A		R3V1	R3	R3V1		R3, R4, R5, R7, R8, R9	R4, R4V
CE-707		R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
CE-708		R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
CE-709		R3V1			R3V1, R4V1, R5V, R7V, R9V	R4V, R5, R7, R8, R9	R4, R4V
G-S 1	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S 2-3	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S 4-5	R2A	R3V1	R3	R3V1	R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S 6	R2A	R3V1			R3V1, R4V1, R4V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S 7	R2A	R3V1				R3, R4, R5. R7, R8, R9	R4, R4V
G-S 8	R2A	R3V1			R3V1, R4V1, R5V, R7V	R3, R4, R5, R7, R8	R4, R4V
G-S 9	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S 10	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S 11	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S 12	R2A	R3V1	R3	R3V1	R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S 13	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S 14	R2A	R3V1				R3, R4	R4, R4V
G-S 15	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S D16	R2A	R3V1	R3	R3V1		R3, R4	R4, R4V
G-S D17	R2A	R3V1	R3	R3V1		R3, R4	R4, R4V
G-S D18	R2A	R3V1	R3	R3V1		R3, R4	R4, R4V
G-S D19	R2A	R3V1	R3	R3V1		R3, R4	R4, R4V
G-S M1	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S M2	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S M3	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S M4	R2A	R3V1			R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
G-S M5	R4	R4V1			R4V1, R5V, R7V, R9V	R4, R5, R7, R8, R9	
TO 1					R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
TO 2					R3V1, R4V1, R5V, R7V, R9V	R3, R4, R5, R7, R8, R9	R4, R4V
TO 3			R3	R3V1	R3V1	R3, R4	R4, R4V

1.2.4 DEEP AQUIFER DRILLING PROGRAM

The Deep Aquifer Drilling Program has been previously described in RBOSP Progress Reports 2 and 4, Hydrologic Program. A summary of the drilling program is reported in RBOSP Progress Report 5.

1.2.5 DEEP AQUIFER COMPLETION PROGRAM

The Deep Aquifer Completion Program is reported in RBOSP Progress Reports 2 and 4, Hydrologic Program, Interpretive Text.

1.2.6 UPPER AND LOWER AQUIFER PUMPING TESTS

Pumping Test Data can be found in RBOSP Progress Report 3, Interpretive and Raw Data Texts. Detailed interpretation is contained in RBOSP Progress Report 4, Interpretive Text, with basic data found in the associated Raw Data Volume.

1.2.7 DEEP AQUIFER MONITORING

The deep aquifer monitoring program started in December, 1974. Progress Reports 2 through 9 have presented data gathered on the baseline deep aquifer monitoring program. Baseline data gathering was completed as of December 1976 on the deep aquifer monitor holes with the exception of the 84 Mesa associated hole G-S M-5. In the appendices of this report are analyses and descriptions of data methods used in the Final Baseline Report.

G-S M-5 is the only deep aquifer monitor hole where baseline data is being gathered. Data are to be gathered through May 1977. G-S M-5 is used to gather data in the uppermost aquifer system for the proposed 84 Mesa disposal site.

As per RBOSP Approved Exploratory Plan, the present monitoring of G-S M-5 consists of measuring static water levels on a monthly basis. Table 1.2-8 is a collection schedule for G-S M-5.

The latest water sample was collected in November 1976. The results of the water quality analysis have been reported in Progress Report 9.

Figure 1.2-26 is a hydrograph of the water levels of G-S M-5 for water year 1977. Shown on Figure 1.2-25 are the locations of the monitor holes.

Deep aquifer water quality analysis occurs semi-annually. A sampling period did not occur during the span of time covered by this report.

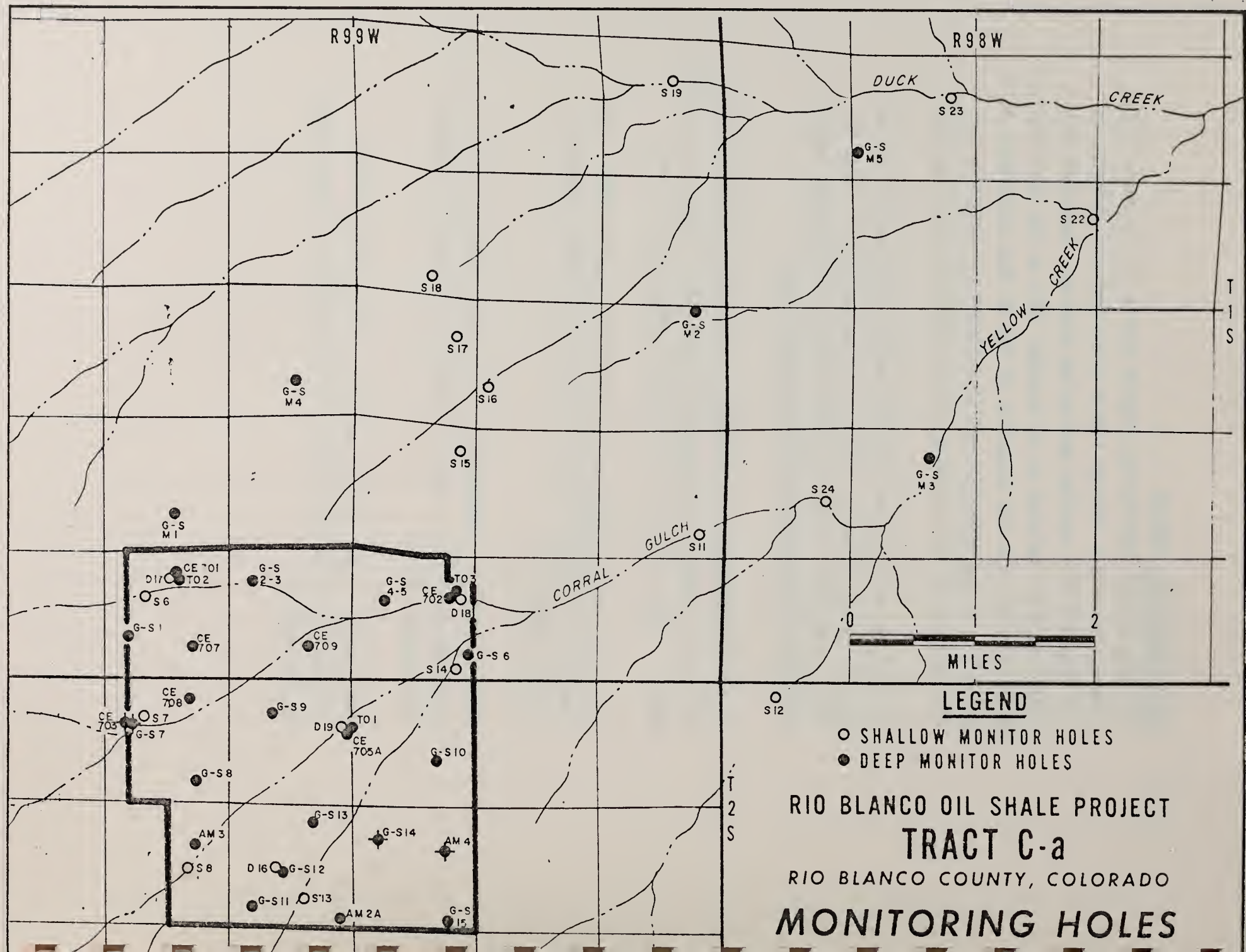

R99W
R98W
T1S
T2S
DUCK
CREEK
YELLOW
CREEK
CORRAL
GULCH
S19
S23
G-S M5
S22
S18
G-S M2
S17
S16
G-S M4
S15
G-S M3
S24
S11
G-S M1
CE 701
D17
T02
S6
G-S 2-3
G-S 4-5
CE 702
T03
D18
G-S 1
CE 707
CE 709
G-S 6
S14
CE 708
G-S 9
CE 703
S7
G-S 7
D19
T01
CE 705A
G-S 10
G-S 8
G-S 13
G-S 14
AM 3
AM 4
S8
D16
G-S 12
G-S 11
S13
AM 2A
G-S 15
S12
0
1
2
MILES
LEGEND
SHALLOW MONITOR HOLES
DEEP MONITOR HOLES
RIO BLANCO OIL SHALE PROJECT
TRACT C-a
RIO BLANCO COUNTY, COLORADO
MONITORING HOLES

Figure 1.2-25

TABLE 1.2-17

DATA COLLECTION SCHEDULE FOR G-S M-5

Monthly

Water Levels Measure

Semi Annually

Water Sample Analyzed For:

Alkalinity	COD	Na
Aluminium	Dissolved Solids	Sr
Ammonia	Ge	Sulfate
Arsenic	Ga	Sulfide
Ba	Fluoride	Ti
Be	Iron	V
Bi	Lead	Zr
Bicarbonate	Li	Zn
Br	Mg	Color
B	Mn	Odor
Dissolved Organic Carbon	Hg	pH
	Mo	Temperature
Calcium	Ni	Conductance
Carbonate	Nitrate plus Nitrite	
Cd	Phenols	
Chloride	Dissolved Phosphate	
Cr	Potassium	
Cu	Se	
Cyanide	Silica	

Radioactivity

Gross Alpha
If >4 pci/l
then
RA 226,
Natural Uranium

Gross Beta
If >100 pci/l
then
SR^{90}
Ce^{137}

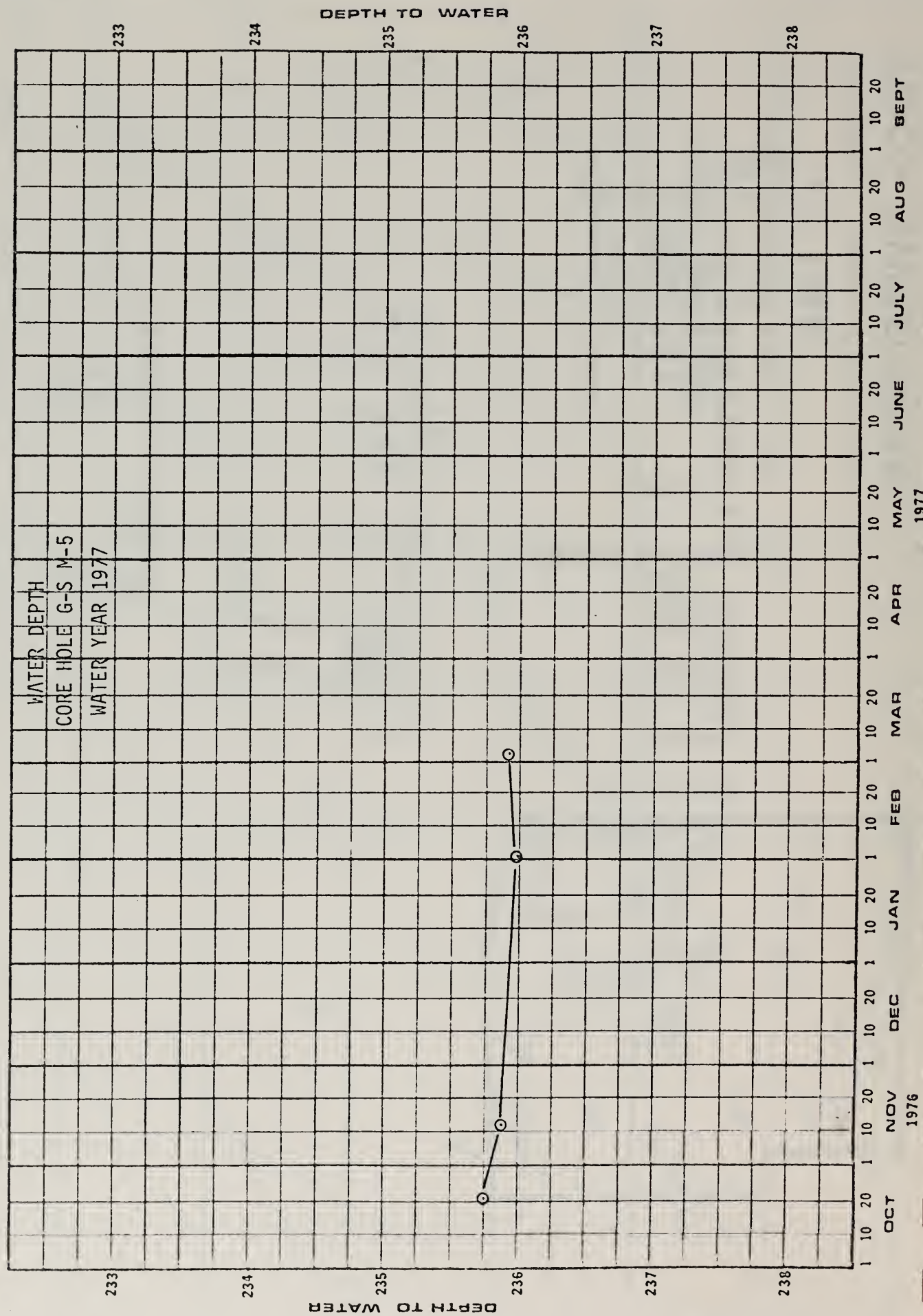

WATER DEPTH
CORE HOLE G-S M-5
WATER YEAR 1977
DEPTH TO WATER
233
234
235
236
237
238
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUNE
JULY
AUG
SEPT
1976
1977

FIGURE 1.2-26

1.2.8 HYDROLOGIC PROGRAM SUMMARY

The following is a summary of the hydrologic studies related to Tract C-a monitoring during the quarter from December 1976 through February 1977. The summary covers three main categories: surface water, alluvial aquifers, deep aquifers.

1.2.8.1 Surface Water

The 2 year baseline data collection from Tract C-a from the seven associated stream gaging stations and the six rain gaging stations has been completed. Surface water data collection for baseline data is presently being conducted only for the four stream gaging stations associated with the proposed processed shale disposal site on 84 Mesa. The four stations are Upper Big Duck Creek north of 84 Mesa, Lower Big Duck Creek north of 84 Mesa, Unnamed Tributary to Yellow Creek, and Corral Gulch south of 84 Mesa.

The Corral Gulch south of 84 Mesa station is the only stream gaging station where flow was reported for this period. Flow at this location was reported to have occurred for the entire reporting period. Flow during this period averaged 0.03 cubic feet per second (cfs). Continuous mean conductivity and continuous mean temperature data have not been entirely processed. The amount of these data available is insufficient for analysis for this period.

1.2.8.2 Alluvial Aquifer

Baseline data gathering of the alluvial aquifer test holes, (G-S S-7, G-S S-8, G-S S-11, G-S S-12) associated with Tract C-a was completed in Feburary 1977.

Baseline data gathering of the alluvial aquifer test holes, G-S S-19, G-S S-22, G-S S-23, and G-S S-24, associated with the proposed processed shale disposal site on 84 Mesa will be completed in May 1977.

Water levels during the quarter had a measured water level decline in the following four holes associated with Tract C-a: G-S S-7, G-S S-8, G-S S-11, and G-S S-12. Alluvial holes G-S S-19 and G-S S-23 had increased water levels. Alluvial holes G-S S-22 and G-S S-24 had only slightly changed water levels measured during the quarter

The eight alluvial holes associated with Tract C-a and 84 Mesa were sampled in February of this quarter according to schedule. Water quality analyses of the February samples show that the water quality of the alluvial aquifers has remained relatively stable compared to previous analyses. An anomalous increase in specific conductivity values occurred for the sample from G-S S-8, however the increase in total dissolved solids is within the expected range, making the reading from conductivity suspect. A rise of 0.79, 1.0 and 6.64 mg/l in nitrogen above the mean from each hole was found for the samples from G-S S-22, G-S S-23 and G-S S-24, respectively; however, no reason for this occurrence could be determined.

1.2.8.3 DEEP AQUIFER MONITORING

Baseline data gathering was completed as of December 1976 on the Deep Aquifer monitor holes with the exception of the 84 Mesa associated hole G-S M-5.

Data is to be gathered through 1977 at G-S M-5. G-S M-5 is used to gather data in the uppermost aquifer system from the proposed 84 Mesa disposal site.

As per RBOSP Approved Exploratory Plan, the present monitoring of G-S M-5 consists of measuring static water levels on a monthly basis. Deep aquifer water quality analysis occurs semi-annually. A sampling period did not occur during the span of time covered in this report.

RIO BLANCO OIL SHALE PROJECT
PROGRESS REPORT 10

DECEMBER 1976, JANUARY, FEBRUARY 1977

HYDROLOGIC PROGRAM
SECTION 1.2

RAW DATA

APRIL 15, 1977

GULF OIL CORPORATION
and
STANDARD OIL COMPANY (INDIANA)

TABLE OF CONTENTS

	Section No.
U.S.G.S. Surface Water Data	1.2.2
Water Quality Data, Alluvial Aquifer Monitoring Program	1.2.3

SURFACE WATER DATA COLLECTION

SECTION 1.2.2

U.S.G.S. SURFACE WATER DATA

EXPLANATION - U.S.G.S. GAGE DATA

Discharge, Water Year 1977

Corral Gulch South of 84 Mesa
Tributary to Yellow Creek East of 84 Mesa
Upper Big Duck Creek North of 84 Mesa
Lower Big Duck Creek South of 84 Mesa

Continuous Mean Conductivity, Water Year 1977

Corral Gulch South of 84 Mesa

Continuous Mean Temperature, Water Year 1977

Corral Gulch South of 84 Mesa

Chemical Analysis, Water Year 1975

Corral Gulch South of 84 Mesa
Lower Big Duck Creek North of 84 Mesa
Yellow Creek near White River, Colorado

Chemical Analysis, Water Year 1977

Corral Gulch near West Line Tract C-a
Corral Gulch East of Tract C-a
Corral Gulch South of 84 Mesa

Sediment Data, Water Years 1975 - 1977

Dry Fork near West Line Tract C-a
Box Elder Gulch near West Line Tract C-a
Corral Gulch near West Line Tract C-a
Corral Gulch East of Tract C-a
Corral Gulch South of 84 Mesa
Yellow Creek near White River, Colorado
"Rinky Dink" Gulch near White River, Colorado
Stake Springs Draw near Confluence with Corral Gulch
Tributary to Yellow Creek East of 84 Mesa
Upper Big Duck Creek North of 84 Mesa
Lower Big Duck Creek North of 84 Mesa

9-192-a. July 1937

Daily Gage Height, in Feet, and Discharge, in Second-Feet, of Corral Creek,

At ~~Near~~ 84 Ranch, Ophir for the Year Ending September 30,

Drainage Area ..... Square Miles. Water-Stage Recorder ..... Ratio

Max. Disch. ..... Sec.-ft. at ..... on ..... (G. H. ..... ft.). Max. G. H. ..... ft. at ..... on .....

Min. Disch. ..... Sec.-ft. on ..... (G. H. ..... ft.). Min. G. H. ..... ft. on .....

S - Discharge subdivided, V - variable shift, a " no gage height, b " ice effect, * Obs. No flow

Calendar Year

Day	October Gage height	October Discharge	November Gage height	November Discharge	December Gage height	December Discharge	January Gage height	January Discharge	February Gage height	February Discharge
		.01								
1	a	.01	a	.03	a	.03	a	.03	a	.02
2		.01		.03		.03		.03		.02
3		.01		.03		.03		.03		.02
4		.01	55	.03		.03		.03		.02
5		.02		.03		.03		.03		.02
6	52	.02		.03		.03		.03		.02
7		.02		.03		.03		.03		.02
8		.02		.03		.03		.03		.02
9		.02		.03		.03		.03		.02
10		.02		.03		.03		.03		.02
11		.02		.03		.03		.03		.03
12		.02		.03		.03		.03		.03
13	53	.02		.03		.03		.03		.03
14		.02		.03	a	.03		.03		.03
15		.02		.03	b	.03		.03		.03
16		.02		.03	57	.04		.02		.03
17		.02		.03	b	.04		.02		.03
18		.02		.03		.04		.02		.03
19		.02		.03		.04		.02		.03
20		.02		.03	b	.04		.02		.03
21	54	.02		.03	a	.03		.02		.03
22		.02		.03		.03		.02	a	.03
23		.02	56	.03		.03		.02	59	
24		.02		.03		.03	58	.02		
25		.02		.03		.03		.02		
26		.02		.03		.03		.02		
27		.02		.03		.03		.02		
28		.02		.03		.03		.02		
29		.03		.03		.03		.02		
30		.03	a	.03		.03		.02		
31	a	.03			a	.03	a	.02		
Total		0.61		0.90		0.98		0.77		
Mean										
Second-feet per square mile										
Run-off in inches										
Run-off in acre-feet										
Maximum										
Minimum										

9-193-a. Rev. 1937

Daily Gage Height, in Feet, and Discharge, in Second-Feet, of DUCK CR. AT UPPER STATION ~~River~~ ~~Creek~~

Near 84 RANCH, COLORADO for the Year Ending September 30, 1977

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DUCK CR. @ UPPER STA. NR 84 RANCH, CO 1977

File Number { Washington 09306240 / District

Used rating table dated NO. 1

PRELIMINARY DATA SUBJECT TO REVISION

Drainage Area 321 Square Miles. Water-Stage Recorder CONTINUOUS Ratio 1 : 6

Gage Read to ..... Once / Twice a Day by .....

Gage heights used to half tenths between ..... and ..... feet hundredths below and tenths above these limits.

Day	October Gage height	October Discharge	November Gage height	November Discharge	December Gage height	December Discharge	January Gage height	January Discharge	February Gage height	February Discharge	March Gage height	March Discharge
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
Total		0		0		0		0		0		

Day	April Gage height	April Discharge	May Gage height	May Discharge	June Gage height	June Discharge	July Gage height	July Discharge	August Gage height	August Discharge	September Gage height	September Discharge
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Day	Fourth	Third	Second	First	Quarter	Fourth	Third	Second	First	Quarter	Fourth	Third	Second	First	Quarter
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															

Computed ..... Checked ..... Date .....

Disch. copied ..... Disch. checked ..... Date .....

G.H. copied ..... G.H. checked ..... Date .....

9-193-a. July 1917

Daily Gage Height, in Feet, and Discharge, in Second-Feet, of Yellow Creek Tributary ~~River~~ Creek

near "84" Ranch, Colorado for the Year Ending September 30, 19 77

Drainage Area .... Square Miles. Water-Stage Recorder Graphical Ratio 1 : 6

Gage Read to .... Once / Twice a Day by ....

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

Yellow Creek Tributary
nr. 84 Ranch
1977 wyr.

File Number { Washington 09306.2? / District ....

PRELIMINARY DATA SUBJECT TO REVISION Used rating table dated ....

Gage heights used to half tenths between ...... and ...... feet; hundredths below and tenths above these limits.

Day	October Gage height	October Discharge	November Gage height	November Discharge	December Gage height	December Discharge	January Gage height	January Discharge	February Gage height	February Discharge	March Gage height	March Discharge	Day	April Gage height	April Discharge	May Gage height	May Discharge	June Gage height	June Discharge	July Gage height	July Discharge	August Gage height	August Discharge	September Gage height	September Discharge
1													1												
2													2												
3													3												
4													4												
5													5												
6													6												
7													7												
8													8												
9													9												
10													10												
11													11												
12													12												
13													13												
14													14												
15		No Flow		No Flow		No Flow		No Flow		No Flow			15												
16													16												
17													17												
18													18												
19													19												
20													20												
21													21												
22													22												
23													23												
24													24												
25													25												
26													26												
27													27												
28													28												
29									X	X			29												
30													30												
31													31												
Total		0		0		0		0		0															
Mean																									
Second-feet per square mile																									
Run-off in inches																									
Run-off in acre-feet																									
Maximum																									

Note: X means observation of no flow

Computed ...... Checked ...... Disch. applied ...... Disch. checked ...... G. H. copied ...... G. H. checked ......

Duck Cr. nr. "84" Ranch, Colo.
1977 W.Yr.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

File Number { Washington 09 30625 / District

PRELIMINARY DATA SUBJECT TO REVISION

Used rating table dated

Daily Gage Height, in Feet, and Discharge, in Second-Feet, of Duck ~~River~~ Creek

Near "84" Ranch, Colorado for the Year Ending September 30, 1977

Drainage Area ..... Square Miles. Water-Stage Recorder Graphical Ratio 1 : 6

Gage Read to ..... Once / Twice a Day by .....

Gage heights used to half tenths between ..... and ..... feet; hundredths below and tenths above these limits.

Day	October Gage height	October Discharge	November Gage height	November Discharge	December Gage height	December Discharge	January Gage height	January Discharge	February Gage height	February Discharge	March Gage height	March Discharge
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
Total		0		0		0		0		0		

Day	April Gage height	April Discharge	May Gage height	May Discharge	June Gage height	June Discharge	July Gage height	July Discharge	August Gage height	August Discharge	September Gage height	September Discharge
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Day	Total	First	Second	Quarter	Fourth	Third	Second	First	Quarter	Fourth	Third	Second	First	Quarter	Period	Year
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																
31																

Computed

Checked

Dsch. applied

Dsch. checked

G.H. applied

G.H. checked

Noted x = observation of no flow

UNITED STATES DEPARTMENT OF THE INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

DIST 08

PRIMARY COMPUTATIONS OF QUALITY OF WATER DIGITAL MONITOR RECORDS

DATA PROCESSED 01-14-77

RT NO 01 TEST DIFF 10

09306244
CORRAL GULCH AT 84 RANCH, CO.
SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C)

PARAMETER CODE 00095 STORE STATISTICS 00001, 00002, 00003

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1977

VALUES AT INDICATED HOURS

S	DATE	MAX	MIN	MEAN		1	2	3	4	5	6	7	8	9	10	11	12
	10-06	1420	1370	1400*	AM						1400	1370	1400	1400	1400	1420	1420
					PM						1480	1480	1480	1480	1480	1480	1480
	10-07	1510	1410	1460	AM	1510	1480	1480	1480	1480	1410	1410	1430	1460	1460	1460	1460
					PM	1480	1460	1460	1410	1410	1550	1570	1600	1570	1600		1620
AR	10-08		1490		AM	1520	1520	1520	1550	1550	1490	1520	1520	1520	1550	1550	1550
					PM	1570	1550	1520	1520	1490	1630	1660	1660	1660	1660	1660	1630
	10-09	1660	1540	1610	AM	1610	1610	1610	1610	1610	1540	1560	1580	1580	1580	1610	1610
					PM	1630	1610	1580	1560	1560	1670	1670	1670	1670	1670	1720	1700
	10-10	1720	1600	1660	AM	1670	1670	1670	1670	1670	1600	1620	1640	1640	1670	1670	1670
					PM	1720	1700	1640	1620	1600	1730	1730	1730	1730	1730	1760	1760
	10-11	1760	1660	1720	AM	1710	1730	1730	1730	1730	1660	1680	1680	1710	1730	1730	1730
					PM	1760	1710	1680	1680	1660	1790	1790	1790	1790	1820	1790	1790
	10-12	1820	1720	1770	AM	1790	1790	1790	1790	1770	1720	1740	1770	1770	1770	1770	1770
					PM	1770	1740	1720	1720	1740	1860	1860	1880	1880	1910	1880	
	10-13	1910	1830	1860*	AM	1830	1830	1830	1830	1830							
					PM												
	PERIOD	1910	1370														

NOTE.- SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS
A - SUCCESSIVE RECORDED PUNCH READINGS DIFFER BY MORE THAN THE SPECIFIED ALLOWABLE TEST DIFFERENCE
R - ONE OR MORE INPUT VALUE IS OUTSIDE THE RANGE OF THE CONVERSION TABLE FOR THAT ITEM
* - DAILY SUMMARY IS FOR AN INCOMPLETE DAY
% - UNIT VALUES RECORD WRITTEN

SHIFT PRORATED FROM	-200.00	ON	8-20(1600 HOURS)	TO	-30.00	ON	9-16(1400 HOURS)
SHIFT PRORATED FROM	-30.00	ON	9-16(1400 HOURS)	TO	-150.00	ON	9-16(1500 HOURS)
SHIFT PRORATED FROM	-150.00	ON	9-16(1500 HOURS)	TO	-230.00	ON	9-23(1500 HOURS)
SHIFT PRORATED FROM	-230.00	ON	9-23(1500 HOURS)	TO	-560.00	ON	10-06(1800 HOURS)
SHIFT PRORATED FROM	-560.00	ON	10-06(1800 HOURS)	TO	-125.00	ON	10-13(1000 HOURS)

UNITED STATES DEPARTMENT OF THE INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION DIST 08
PRIMARY COMPUTATIONS OF QUALITY OF WATER DIGITAL MONITOR RECORDS

09306244 DATA PROCESSED 01-14-77 RT NO 02 TEST DIFF 10
CORRAL GULCH AT 84 RANCH, CO.
TEMPERATURE (DEG. C) OF WATER PARAMETER CODE 00010 STORE STATISTICS 00001, 00002, 00003

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1977

S	DATE	MAX	MIN	MEAN		VALUES AT INDICATED HOURS 1	2	3	4	5	6	7	8	9	10	11	12
A	10-06	12.5	6.9	9.8*	AM												
					PM						12.5	12.1	11.2	9.9	8.7	7.6	6.9
A	10-07	17.8	3.3	8.7	AM	6.5	6.1	5.4	5.0	4.9	4.9	5.0	4.8	4.2	3.6	3.3	4.6
					PM	7.3	10.3	13.4	16.1	17.6	17.8	16.5	13.5	11.5	10.1	8.5	7.1
A	10-08	19.0	1.6	8.4	AM	5.1	4.3	3.8	3.2	2.8	2.4	2.1	1.8	1.6	1.7	5.8	6.3
					PM	10.0	13.4	16.6	18.6	19.0	18.0	15.4	13.2	11.4	9.8	8.3	7.1
A	10-09	20.0	2.5	9.2	AM	6.0	5.2	4.6	4.1	3.6	3.2	2.9	2.7	2.5	2.6	4.1	7.2
					PM	10.6	14.4	17.6	19.5	20.0	18.8	16.3	14.1	12.0	10.4	9.1	7.9
A	10-10	19.6	2.9	9.3	AM	6.8	6.0	5.3	4.8	4.4	4.0	3.6	3.2	2.9	2.9	4.4	7.5
					PM	11.0	14.9	17.8	19.5	19.6	17.8	15.3	13.3	11.6	10.0	8.6	7.4
A	10-11	16.6	4.1	8.7	AM	6.4	5.7	5.3	4.9	4.6	4.4	4.2	4.1	4.1	4.2	5.2	6.8
					PM	10.2	12.9	15.2	15.3	16.6	16.0	14.4	12.1	10.7	9.3	8.0	7.1
A	10-12	18.1	3.7	8.9	AM	5.7	5.3	4.9	4.6	4.3	4.0	3.9	3.8	3.7	4.9	7.5	10.6
					PM	13.9	16.6	18.1	18.1	16.6	14.1	12.2	10.7	9.2	7.9	6.8	5.9
A	10-13	6.2	2.0	3.5*	AM	5.0	4.4	3.8	3.4	3.0	2.7	2.4	2.0	2.0	3.4	6.2	
					PM												
PERIOD		20.0	1.6														

NOTE.- SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS
A - SUCCESSIVE RECORDED PUNCH READINGS DIFFER BY MORE THAN THE SPECIFIED ALLOWABLE TEST DIFFERENCE
R - ONE OR MORE INPUT VALUE IS OUTSIDE THE RANGE OF THE CONVERSION TABLE FOR THAT ITEM
* - DAILY SUMMARY IS FOR AN INCOMPLETE DAY
% - UNIT VALUES RECORD WRITTEN

SHIFT PRORATED FROM -2.00 ON 10-06(1800 HOURS) TO -3.00 ON 10-13(1000 HOURS)

PROCESS DATE 02/03/7

09306244 - CORRAL GULCH AT 84 RANCH, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)
1975											
12...	1300	--	19	80	80	120	110	190	1.9	649	0
23...	1300	.51	15	120	10	120	120	170	2.4	582	0
LY											
15...	1330	.56	21	40	250	140	100	180	4.4	638	0
...	1430	.72	17	60	190	120	120	190	4.1	640	0
27...	1300	.40	17	30	110	120	90	180	3.0	519	0
...	0930	.27	20	0	110	120	120	180	2.8	658	0
24...	1345	.43	17	10	120	110	91	170	2.8	584	0
T.											
24...	1400	.19	17	10	5	110	100	200	3.3	626	0
15...	1300	.17	15	80	--	110	100	190	2.4	634	0

PROCESS DATE 02/03/[illegible]

09306244 - CORRAL GULCH AT 84 RANCH, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOL-VED SUL-FIDE (S) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (N) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)
[illegible] 1975											
12...	532	.[illegible]	5[illegible]	19	.3	.05	.22	.00	.00	.05	.01
[illegible]...	477	.0	5[illegible]	21	.3	1.3	5.7	.02	.07	1.3	.00
[illegible]											
15...	523	.1	6[illegible]	23	.3	.50	2.2	.04	.13	.54	.00
[illegible]...	565	.0	5[illegible]	21	.4	.89	3.9	.05	.16	.94	.04
[illegible]											
[illegible]...	4[illegible]	.[illegible]	55[illegible]	20	.3	--	--	--	--	--	--
[illegible]											
[illegible]...	546	.[illegible]	57[illegible]	19	.3	.64	2.8	.04	.13	.68	.00
[illegible]...	479	.0	51[illegible]	19	.3	.72	3.2	.03	.10	.75	.05
[illegible]											
[illegible]...	513	.[illegible]	52[illegible]	21	.3	.22	.97	.01	.03	.23	.00
[illegible]											
1[illegible]...	52[illegible]	--	57[illegible]	19	.3	--	--	--	--	.66	.02

PROCESS DATE 02/[illegible]/76

09306244 - CORRAL GULCH AT 84 RANCH, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	DIS-SOLVED AMMONIA (NH4) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	PERCENT SODIUM
JUNE, 1975											
12...	.01	.82	.01	.01	.01	1370	1.86	--	750	220	35
[illegible]...	.00	.43	.36	.00	.00	1320	1.80	2.89	790	320	32
JULY											
15...	.00	.79	.04	.01	.02	1390	1.89	1.88	760	240	34
31...	.25	.86	.02	.01	.00	1370	1.86	2.66	790	270	34
AUG.											
27...	--	.57	.00	.00	--	1250	1.70	1.35	670	240	37
SEP.											
0[illegible]...	.00	.41	.02	.01	.01	1360	1.85	.99	790	250	33
2[illegible]...	.[illegible]	1.[illegible]	.00	.01	.01	1210	1.65	1.40	650	170	36
OCT.											
2[illegible]...	.00	.77	.01	.01	.01	1280	1.74	.66	690	170	39
NOV.											
1[illegible]...	.03	--	.00	--	.01	1330	1.81	.61	690	170	38

PROCESS DATE 02/[illegible]

09306244 - CORRAL GULCH AT 84 RANCH, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ATMOS-PHERIC ODOR (SEVER-ITY)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	OIL AND GREASE (MG/L)	CYANIDE (CN) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)
JUNE, 1975											
12...	3.0	2[illegible]	7.5	10.0	0	2	4.4	33	0	.00	3
25...	2.6	1780	8.6	13.0	0	20	10.4	2.3	2	.01	3
JULY											
15...	2.8	2000	8.4	20.0	0	6	7.6	4.1	4	.00	5
[illegible]...	2.9	1900	8.5	23.0	0	5	13.8	3.2	1	.00	6
AUG.											
27...	3.0	1900	8.1	15.5	--	2	--	6.6	1	.00	6
SEPT.											
24...	2.8	1800	8.1	12.0	0	0	10.2	8.4	2	.00	7
[illegible]...	2.9	9[illegible]	8.1	20.5	0	1	7.9	7.4	1	.00	4
OCT.											
[illegible]...	3.3	1800	8.1	9.5	0	1	18.1	8.0	--	.00	4
NOV.											
18...	3.2	1700	8.1	7.0	0	--	--	8.1	--	--	3

PROCESS DATE 02/03/74

09306244 - CORRAL GULCH AT B4 RANCH, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED LITHIUM (LI) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
JUNE, 1975										
12...	0	190	0	10	0	0	10	.0	1	10
25...	0	150	0	0	1	1	20	.1	6	10
JULY										
15...	200	170	1	10	1	8	0	.0	3	10
30...	0	150	1	0	2	0	0	.0	3	20
AUG.										
27...	<200	200	0	0	0	0	20	.0	3	0
SEP.										
09...	<200	210	0	0	3	1	0	.0	2	10
24...	100	190	1	10	2	3	10	.1	3	10
OCT.										
24...	100	170	0	10	2	3	10	.0	1	0
NOV.										
18...	--	190	--	--	--	--	--	--	--	--

PROCESS DATE 02/03/

09306250 - DUCK CREEK NEAR 84 RANCH, CO.

DISTRICT CODE 08

WATER QUALITY DATA

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)
SEP.. 1975										
10...	2200	13	120	10	29	6.8	48	4.2	115	0

PROCESS DATE 02/03/7-

09306250 - DUCK CREEK NEAR 84 RANCH, CO.

DISTRICT CODE 08

WATER QUALITY DATA

DATE	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOL-VED SUL-FIDE (S) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (N) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)
SEP.. 1975										
10...	94	.0	80	12	.2	1.9	8.4	.21	.69	2.1

PROCESS DATE 02/03/7[illegible]

09306250 - DUCK CREEK NEAR 84 RANCH, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA (NH3) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
SEP.. 1975										
10...	.53	.68	18	4.9	2.7	.02	260	.35	100	6

PROCESS DATE 02/03/7

09306250 - DUCK CREEK NEAR 84 RANCH, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ATMOS-PHERIC ODOR (SEVER-ITY)	TUR-BID-ITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)	CYANIDE (CN) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)
SEP., 1975										
10...	50	2.1	380	8.6	13.0	0	3400	.5	.01	10

PROCESS DATE 02/03/7[illegible]

09306250 - DUCK CREEK NEAR 84 RANCH, CO.

DISTRICT CODE 08

WATER QUALITY DATA

DATE	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED LITHIUM (LI) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
SEP., 1975										
10...	<200	110	0	0	17	2	10	.0	3	10

PROCESS DATE 02/03/7[illegible]

09306255 - YELLOW CREEK NEAR WHITE RIVER, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED LITHIUM (LI) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT.. 1974										
25...	--	--	--	--	--	--	--	--	--	--
DEC.										
11...	160	230	<60	<20	<4	<20	170	<.1	3	<60
23...	<100	700	2	0	2	3	160	.1	1	140
JAN.. 1975										
20...	200	590	0	0	0	3	140	.9	0	20
21...	0	630	0	10	2	5	140	.0	3	30
FEB.										
12...	<100	850	1	0	6	3	150	.0	3	20
27...	400	640	0	0	1	2	120	.0	1	7
MAR.										
12...	200	560	<170	<15	5	<16	160	.0	3	6
26...	100	630	0	0	0	0	120	.0	2	0
APR.										
[illegible]...	<100	650	0	0	3	0	120	.3	3	6
[illegible]...	300	700	0	0	1	0	140	.0	3	20
23...	0	620	1	0	7	9	130	.0	1	0
MAY										
1[illegible]...	300	660	2	0	3	4	170	.2	1	6
2[illegible]...	200	820	1	0	2	5	120	.0	3	30
JUN.										
1[illegible]...	300	730	0	0	1	1	170	.0	2	10
2[illegible]...	200	740	0	0	3	1	160	.0	2	10
JUL.										
1[illegible]...	400	570	1	0	4	0	130	.0	2	20
[illegible]...	[illegible]	590	1	0	4	2	160	.0	2	40
SEP.										
1[illegible]...	400	720	0	0	2	1	160	.0	3	10
2[illegible]...	200	790	1	0	5	2	180	.0	2	0
OCT.										
1[illegible]...	200	770	1	80	4	4	120	.0	2	0
2[illegible]...	200	630	1	10	4	0	160	.0	2	10
NOV.										
15...	2[illegible]	690	0	0	0	0	150	.1	2	10
31...	1[illegible]	610	1	4	5	1	100	.0	3	2
DEC.										
21...	--	7[illegible]	--	--	--	--	--	--	--	--
30.										
1[illegible]...	600	690	1	0	4	3	160	.0	2	0

09306255 - YELLOW CREEK NEAR WHITE RIVER, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ATMOS-PHERIC ODOR (SEVER-ITY)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	OIL AND GREASE (MG/L)	CYANIDE (CN) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)
[illegible] 1974											
[illegible]...	11	3110	8.6	12.0	0	--	--	5.7	--	--	--
[illegible]											
11...	15	3500	8.5	.5	0	60	11.9	9.4	0	.00	5
[illegible]...	14	4000	8.5	1.5	0	70	11.5	7.1	2	.00	4
[illegible] 1975											
[illegible]...	13	4000	8.3	3.0	0	4	10.6	12	17	.00	3
[illegible]...	13	3500	8.3	1.0	0	300	11.4	13	6	.00	4
[illegible]											
[illegible]...	13	4000	8.4	3.0	0	200	10.8	10	8	.00	2
[illegible]...	12	3450	8.4	1.0	--	300	--	11	8	.00	0
[illegible]											
12...	13	3500	8.4	9.0	2	3	8.5	10	3	.00	5
[illegible]...	12	3600	8.7	3.5	2	85	10.6	5.2	3	.00	3
[illegible]											
[illegible]...	13	3250	8.8	6.0	--	3	10.4	4.3	--	--	1
[illegible]...	15	3400	8.7	9.0	--	400	9.1	6.2	2	.00	5
[illegible]...	13	3500	8.8	9.0	0	56	9.6	3.8	2	.00	6
[illegible]											
1...	13	3000	8.7	17.0	0	18	7.6	5.4	1	.00	5
[illegible]...	13	3020	--	9.5	0	230	9.7	--	1	.00	5
[illegible]											
1...	15	4000	9.4	21.5	0	23	8.6	1.1	0	.00	5
[illegible]...	15	4200	9.1	24.0	0	4	8.4	2.3	--	.00	9
[illegible]											
1...	14	3[illegible]0	8.5	19.0	0	150	7.4	7.9	1	.00	6
[illegible]...	15	3500	8.9	17.0	0	12	11.0	3.9	E1	.00	4
[illegible]											
1...	15	400[illegible]	8.4	14.0	0	44	8.1	12	0	.00	6
[illegible]...	17	[illegible]	8.6	17.0	0	45	9.9	7.7	0	.00	5
[illegible]											
[illegible]...	15	4000	10.1	19.0	0	20	9.9	.2	1	.00	4
[illegible]...	15	400[illegible]	8.1	8.5	0	20	12.2	24	0	.00	7
[illegible]											
[illegible]...	15	4000	8.6	1.5	0	5	--	7.8	0	.00	5
[illegible]...	13	3500	8.8	10.0	0	290	--	3.7	--	.00	5
[illegible]											
[illegible]...	16	5000	8.4	.0	0	--	12.5	13	--	--	4
[illegible]											
[illegible]...	15	4000	8.5	.0	0	--	12.5	10	0	.00	4

09306255 - YELLOW CREEK NEAR WHITE RIVER, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	DIS-SOLVED AMMONIA (NH4) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	PERCENT SODIUM
OCT.. 1974											
25...	--	--	--	--	.02	2090	2.84	--	540	0	71
DEC.											
11...	.44	.92	.12	.17	.07	2590	3.52	16.5	520	0	77
23...	.31	.74	.14	.13	.08	2510	3.41	13.5	560	0	75
JAN.. 1975											
[illegible]...	.31	.75	.10	.08	.07	2320	3.16	--	560	0	73
21...	.33	1.[illegible]	.15	.15	.05	2280	3.10	--	490	0	75
FEB.											
1[illegible]...	.30	1.2	.07	.43	.10	2390	3.25	13.1	610	0	72
27...	.52	.94	.22	.10	.10	2400	3.26	14.7	640	0	71
[illegible]											
1[illegible]...	.00	.17	.02	.06	.05	2320	3.16	18.6	550	0	74
[illegible]...	.22	.71	.13	.12	.12	2450	3.33	14.6	650	0	70
[illegible]											
[illegible]...	.24	--	--	.30	.11	2270	3.09	7.66	500	0	75
[illegible]...	.3[illegible]	2.[illegible]	.79	.42	.05	2740	3.73	25.0	590	0	75
[illegible]...	.00	.[illegible]	.09	.01	.04	2330	3.17	12.0	550	0	73
[illegible]											
1[illegible]...	.08	.3[illegible]	.04	.01	.02	2430	3.30	11.2	570	0	74
[illegible]...	.0[illegible]	1.4	.10	.02	.02	2250	3.06	--	500	0	74
[illegible]											
1[illegible]...	.01	.[illegible]	.[illegible]1	.01	.00	2540	3.45	--	550	0	76
[illegible]...	.03	.45	.01	.01	.01	2530	3.44	7.51	500	0	77
[illegible]											
1[illegible]...	.00	.[illegible]	.24	.05	.00	2280	3.10	12.1	500	0	75
[illegible]...	.05	.57	.03	.00	.00	2550	3.47	7.57	490	0	78
[illegible]											
1[illegible]...	.00	.[illegible]	.05	.02	.00	2520	3.43	--	510	0	77
[illegible]...	.04	.47	.00	.00	.00	2530	3.44	5.19	440	0	80
[illegible]											
1[illegible]...	.00	.[illegible]	.04	.02	.00	2570	3.50	--	520	0	77
2[illegible]...	.04	.4[illegible]	.04	.02	.00	2600	3.54	9.69	570	0	76
OCT.											
1[illegible]...	.04	.76	.02	.02	.00	2640	3.59	6.56	570	0	75
31...	.01	2.1	.28	.01	.01	2130	2.90	--	450	0	75
[illegible]											
21...	.00	--	.00	--	.01	2700	3.67	18.0	550	0	77
[illegible]											
1[illegible]...	.2[illegible]	--	.11	--	.07	2870	3.90	--	650	0	74

PROCESS DATE 02/03/7[illegible]

09306255 - YELLOW CREEK NEAR WHITE RIVER, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOL-VED SUL-FIDE (S) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (N) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)
OCT.. 1974											
25...	1170	--	510	100	1.9	--	--	--	--	1.3	--
DEC.											
11...	1520	.0	560	140	2.3	--	--	--	--	2.3	.34
23...	1440	.5	560	120	2.3	2.2	9.7	.02	.07	2.2	.24
JAN.. 1975											
[illegible]...	1250	.1	570	110	2.0	1.8	7.9	.02	.07	1.8	.24
[illegible]...	1280	.2	560	110	2.1	2.1	9.3	.02	.07	2.1	.26
FEB.											
1...	1340	.1	540	120	2.0	2.7	12	.04	.13	2.7	.23
27...	1360	.1	560	110	2.2	1.8	7.9	.01	.03	1.8	.40
MAR.											
12...	1330	.0	490	130	2.0	2.1	9.3	.00	.00	2.1	.00
24...	1330	.1	640	110	1.9	1.5	6.6	.01	.03	1.5	.17
APR.											
[illegible]...	1350	.3	470	130	1.2	2.2	9.7	.01	.03	2.2	.19
09...	1500	.2	630	130	1.6	1.8	7.9	.01	.03	1.8	.23
23...	1220	.1	600	120	2.1	.99	4.4	.01	.03	1.0	.00
MAY											
1[illegible]...	1300	.1	570	120	2.1	.57	2.5	.01	.03	.58	.06
[illegible]...	1270	.0	550	100	2.0	.34	1.5	.01	.03	.35	.00
JUN											
1[illegible]...	1460	.3	600	130	2.4	.01	.04	.00	.00	.01	.01
[illegible]...	1500	.3	580	130	2.4	.11	.49	.02	.07	.13	.02
JUL											
1[illegible]...	1280	.1	540	110	1.8	.50	2.2	.01	.03	.51	.00
[illegible]...	155[illegible]	.0	510	140	2.5	.99	4.4	.01	.03	1.0	.04
[illegible]											
1[illegible]...	1510	.0	530	140	2.2	.28	1.2	.06	.20	.34	.00
[illegible]...	157[illegible]	.0	450	140	2.4	.58	2.6	.07	.23	.65	.03
[illegible]											
[illegible]...	1550	.[illegible]	510	150	2.3	.64	2.8	.06	.20	.70	.00
[illegible]...	1560	.[illegible]	520	140	2.3	.77	3.4	.01	.03	.78	.03
[illegible]											
2[illegible]...	1590	.2	540	130	2.1	.65	2.9	.01	.03	.66	.03
21...	1200	.[illegible]	510	110	1.8	.54	2.4	.02	.07	.56	.01
[illegible]											
2[illegible]...	1620	--	550	150	2.4	--	--	--	--	1.5	.00
[illegible]											
1[illegible]...	1660	.0	560	130	2.4	--	--	--	--	1.4	.22

09306255 - YELLOW CREEK NEAR WHITE RIVER, CO. DISTRICT CODE 08

WATER QUALITY DATA

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)
[illegible] 1974											
25...	1300	--	9.1	40	30	34	110	610	4.7	1210	106
[illegible]											
11...	1530	2.3	16	20	17	41	100	800	3.7	1760	46
23...	1130	1.9	17	20	20	43	110	770	3.6	1760	0
[illegible] 1975											
[illegible]...	1300	--	16	10	30	42	110	700	3.5	1530	0
21...	1130	--	15	50	10	30	100	680	3.5	1350	105
[illegible]											
12...	1030	2.0	15	170	40	45	120	730	4.3	1630	0
27...	1100	2.2	15	10	50	40	130	710	4.2	1450	103
[illegible]											
12...	1400	2.0	20	65	14	37	110	710	4.6	1620	0
25...	1030	2.2	14	20	20	45	130	700	3.5	1210	203
[illegible]											
[illegible]...	120	1.2	14	10	10	37	98	680	3.8	1480	97
[illegible]...	1300	3.3	14	10	10	40	120	840	4.4	1930	0
23...	1000	1.0	11	30	30	7.0	130	710	7.4	1490	1
[illegible]											
1[illegible]...	11[illegible]	1.7	7.1	40	10	31	120	740	3.9	1510	87
2[illegible]...	1115	--	5.7	660	50	36	100	680	4.5	1150	194
[illegible]											
13...	1115	--	1.9	20	0	21	120	780	3.5	1490	140
28...	134[illegible]	1.1	3.7	10	0	17	110	780	3.6	1550	139
[illegible]											
15...	1[illegible]	1.9	14	20	0	42	96	700	5.5	1340	107
[illegible]...	09[illegible]	1.1	.3	90	20	16	110	810	3.9	596	657
[illegible]											
14...	091[illegible]	--	1.1	10	10	24	110	800	5.0	1220	308
[illegible]...	111[illegible]	.78	3.7	30	0	18	97	840	4.8	1590	160
[illegible]											
1[illegible]...	12[illegible]	--	8.9	20	0	25	110	820	4.8	1620	135
29...	1045	1.3	9.3	10	10	31	120	830	3.7	1900	0
[illegible]											
1[illegible]...	10[illegible]	.92	6.4	0	10	32	120	800	4.3	1790	75
31...	13[illegible]	--	[illegible].3	120	10	37	88	640	6.5	1300	82
[illegible]											
21...	1130	2.4	8.9	70	--	37	110	850	4.1	1600	182
[illegible]											
1[illegible]...	1[illegible]	--	14	20	--	44	130	870	4.2	1680	172

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CENTRAL LABORATORY, DENVER, COLORADO

WATER QUALITY ANALYSIS
LAB ID # 294078 RECORD # 41490

SAMPLE LOCATION: CORRAL GULCH NEAR RANGELY, CO.
STATION ID: 09306242 LAT.LONG.SEQ.: 395513 1082820 00
DATE OF COLLECTION: BEGIN--761012 END-- TIME--1220
STATE CODE: 08 COUNTY CODE: 103 PROJECT IDENTIFICATION: 460800300
DATA TYPE: 2 SOURCE: SURFACE WATER GEOLOGIC UNIT:
COMMENTS:

MAIL TO MEEKER CO
SCHEDULES USED: 361 0 0 0
NUMBER OF DETERMINATIONS: 28 HCODE = 18
COST OF ANALYSIS $ 76.98 BILLING CODE: 08
SUBMIT CORRECTIONS TO THE DENVER CENTRAL LAB WITHIN 15 DAYS FROM 12/18/76. INDICATE THE CENTRAL LAB ID # AND RECORD # WITH RESPONSE.
WRD-QW FILE STORAGE WAS REQUESTED AND THE STATION HEADING INFORMATION IN THE WRD STATION HEADER FILE IS PASSWORD PROTECTED.

ALK,TOT (AS CACO3)	MG/L	347	PH FIELD		7.9
BICARBONATE	MG/L	423	PHOS ORTHO DIS AS P	MG/L	0.03
[illegible] DISSOLVED	UG/L	130	PHOSPHATE DIS ORTHO	MG/L	0.09
CALCIUM DISS	MG/L	79	PHOSPHATE TOT AS PO4	MG/L	0.25
CARBON DIS ORGANIC	MG/L	5.2	PHOSPHORUS TOT AS P	MG/L	0.08
CARBON ORG SUS	MG/L	0.3	POTASSIUM DISS	MG/L	1.5
CARBONATE	MG/L	0	RESIDUE DIS CALC SUM	MG/L	766
CHLORIDE DISS	MG/L	12	RESIDUE DIS TON/AFT		1.04
COLOR		3	RESIDUE DIS TON/DAY		1.30
FLUORIDE DISS	MG/L	0.4	SAR		2.0
HARDNESS NON.CARB	MG/L	110	SILICA DISSOLVED	MG/L	22
HARDNESS TOTAL	MG/L	450	SODIUM DISS	MG/L	100
MAGNESIUM DISS	MG/L	62	SODIUM PERCENT		32
NITROGEN NH4 AS NH4 DIS	MG/L	0.00	SP. CONDUCTANCE FLD		1100
NITROGEN DIS ORG ASN	MG/L	0.24	SP. CONDUCTANCE LAB		1070
NITROGEN DISS KJD	MG/L	0.24	STREAMFLOW(CFS)-INST		0.63
NITROGEN NH4 ASN DIS	MG/L	0.00	SULFATE DISS	MG/L	280
NO2+NO3 AS N DISS	MG/L	0.16	TURBIDITY (NTU) EPA		4.7
OD ATMO(SEVERITY)		0	WATER TEMP (DEG C)		11.0
OXYGEN DISSOLVED	MG/L	9.5	WEATHER DESCRIPTION		0

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
CALCIUM DISS	79	3.943	BICARBONATE	423	6.933
MAGNESIUM DISS	62	5.101	CARBONATE	0	0.000
POTASSIUM DISS	1.5	0.039	CHLORIDE DISS	12	0.339
SODIUM DISS	100	4.350	FLUORIDE DISS	0.4	0.022
			SULFATE DISS	280	5.830
			NO2+NO3 AS N D	0.16	0.012
TOTAL		13.431	TOTAL		13.134

PERCENT DIFFERENCE = 1.12

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CENTRAL LABORATORY, DENVER, COLORADO

WATER QUALITY ANALYSIS
LAB ID # 294080 RECORD # 41496

Corral Gulch bel Water Gulch

SAMPLE LOCATION: "NO INFORMATION IN THE STATION HEADER FILE."
STATION ID: 09306235 LAT.LONG.SEQ.: * NONE GIVEN *
DATE OF COLLECTION: BEGIN--761012 END-- TIME--1040
COUNTY CODE: PROJECT IDENTIFICATION: 460800300
DATA TYPE: 2 SOURCE: SURFACE WATER GEOLOGIC UNIT:
COMMENTS:
CORRAL GULCH BELOW WATER G. WJO KJC

MAIL TO MEEKER CO BCODE: 08
SCHEDULES USED: 361 0 0 0
TOTAL PARAMETERS: 41 HCODE = 0
COST OF ANALYSIS $ 76.98 DOP--770115
SUBMIT CORRECTIONS TO CENTRAL LAB WITHIN
15 DAYS FROM BELOW STAMPED DATE. INDICATE
CENTRAL LAB ID # AND RECORD # WITH RESPONSE.
WRD-QW FILE STORAGE REQUESTED. UPDATES TO THE
STATION HEADER FILE WILL BE MADE IN THE
DISTRICT RETRIEVAL PROGRAM " LABPRIM ".

ALK.TOT (AS CACO3)	MG/L	271	PH FIELD		8.0
BICARBONATE	MG/L	330	PHOS ORTHO DIS AS P	MG/L	0.01
[illegible] DISSOLVED	UG/L	100	PHOSPHATE DIS ORTHO	MG/L	0.03
CALCIUM DISS	MG/L	90	PHOSPHATE TOT AS PO4	MG/L	0.03
CARBON DIS ORGANIC	MG/L	22	PHOSPHORUS TOT AS P	MG/L	0.01
CARBON ORG SUS	MG/L	0.1	POTASSIUM DISS	MG/L	2.0
CARBONATE	MG/L	0	RESIDUE DIS CALC SUM	MG/L	741
CHLORIDE DISS	MG/L	9.3	RESIDUE DIS TON/AFT		1.01
COLOR		3	RESIDUE DIS TON/DAY		0.30
FLUORIDE DISS	MG/L	0.3	SAR		2.0
HARDNESS NONCARB	MG/L	210	SILICA DISSOLVED	MG/L	22
HARDNESS TOTAL	MG/L	480	SODIUM DISS	MG/L	99
MAGNESIUM DISS	MG/L	62	SODIUM PERCENT		31
NITR. NH4 AS NH4 DIS	MG/L	0.00	SP. CONDUCTANCE FLD		1000
NITROGEN DIS ORG ASN	MG/L	0.30	SP. CONDUCTANCE LAB		955
NITROGEN DISS KJD	MG/L	0.30	STREAMFLOW(CFS)-INST		0.15
NITROGEN NH4 ASN DIS	MG/L	0.00	SULFATE DISS	MG/L	290
NO2+NO3 AS N DISS	MG/L	0.83	TURBIDITY (NTU) EPA		2.0
OTHER ATMO(SEVERITY)		0	TURBIDITY (SEVERITY)		0
OXYGEN DISSOLVED	MG/L	10.3	WATER TEMP (DEG C)		11.0
			WEATHER DESCRIPTION		0

QUALITY CONTROL DOMAINS

Date	
Ca ✓	HCO3 ✓
Mg ✓	CO3 ✓
Na ✓	Cl ✓
K	SO4 ✓
KX106 ✓	

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
CALCIUM DISS	90	4.491	BICARBONATE	330	5.409
MAGNESIUM DISS	62	5.101	CARBONATE	0	0.000
POTASSIUM DISS	2.0	0.052	CHLORIDE DISS	9.3	0.263
SODIUM DISS	99	4.307	FLUORIDE DISS	0.3	0.016
			SULFATE DISS	290	6.038
			NO2+NO3 AS N D	0.83	0.060
TOTAL		13.949	TOTAL		11.784

PERCENT DIFFERENCE = 8.41

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CENTRAL LABORATORY, DENVER, COLORADO

WATER QUALITY ANALYSIS
LAB ID # 294079 RECORD # 41493
Corral Gulch @ 84 Ranch

SAMPLE LOCATION: "NO INFORMATION IN THE STATION HEADER FILE."
STATION ID: 09306244 LAT.LONG.SEQ.: * NONE GIVEN *
DATE OF COLLECTION: BEGIN--761013 END-- TIME--1005
COUNTY CODE: PROJECT IDENTIFICATION: 460800300
DATA TYPE: 2 SOURCE: SURFACE WATER GEOLOGIC UNIT:
COMMENTS:
CORRAL GULCH AT 84 RANCH WJO KJC

MAIL TO MEEKER CO BCODE: 08
SCHEDULES USED: 361 0 0 0
TOTAL PARAMETERS: 40 HCODE = 0
COST OF ANALYSIS $ 79.57 DOP--770115
SUBMIT CORRECTIONS TO CENTRAL LAB WITHIN
15 DAYS FROM BELOW STAMPED DATE. INDICATE
CENTRAL LAB ID # AND RECORD # WITH RESPONSE.
WRD-QW FILE STORAGE REQUESTED. UPDATES TO THE
STATION HEADER FILE WILL BE MADE IN THE
DISTRICT RETRIEVAL PROGRAM " LABPRIM ".

ALK.TOT (AS CACO3)	MG/L	425	PH FIELD		8.4
BICARBONATE	MG/L	518	PHOS ORTHO DIS AS P	MG/L	0.02
BORON DISSOLVED	UG/L	200	PHOSPHATE DIS ORTHO	MG/L	0.06
CALCIUM DISS	MG/L	110	PHOSPHATE TOT AS PO4	MG/L	0.03
CARBON DIS ORGANIC	MG/L	6.7	PHOSPHORUS TOT AS P	MG/L	0.01
CARBON ORG SUS	MG/L	0.1	POTASSIUM DISS	MG/L	2.3
CARBONATE	MG/L	0	RESIDUE DIS CALC SUM	MG/L	1290
CHLORIDE DISS	MG/L	20	RESIDUE DIS TON/AFT		1.75
COLOR		4	RESIDUE DIS TON/DAY		0.07
FLUORIDE DISS	MG/L	0.3	SAR		3.1
HARDNESS NONCARB	MG/L	300	SILICA DISSOLVED	MG/L	22
HARDNESS TOTAL	MG/L	730	SODIUM DISS	MG/L	190
MAGNESIUM DISS	MG/L	110	SODIUM PERCENT		36
NITR. NH4 AS NH4 DIS	MG/L	0.01	SP. CONDUCTANCE FLD		1850
NITROGEN DIS ORG ASN	MG/L	0.28	SP. CONDUCTANCE LAB		1620
NITROGEN DISS KJD	MG/L	0.29	STREAMFLOW(CFS)-INST		0.02
NITROGEN NH4 ASN DIS	MG/L	0.01	SULFATE DISS	MG/L	580
NO2+NO3 AS N DISS	MG/L	0.02	TURBIDITY (NTU) EPA		0.60
ODOR ATMO(SEVERITY)		1	WATER TEMP (DEG C)		7.5
OXYGEN DISSOLVED	MG/L	12.7	WEATHER DESCRIPTION		0

QUALITY CONTROL RERUNS
Date
Ca ✓ 10 HCO3 ✓
Mg ✓ 10 CO3 ✓
Na ✓ 190 Cl ✓
K SO4 ✓
KX106

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
CALCIUM DISS	110	5.489	BICARBONATE	518	8.491
MAGNESIUM DISS	110	9.049	CARBONATE	0	0.000
POTASSIUM DISS	2.3	0.059	CHLORIDE DISS	20	0.565
SODIUM DISS	190	8.265	FLUORIDE DISS	0.3	0.016
			SULFATE DISS	580	12.076
			NO2+NO3 AS N D	0.02	0.002
TOTAL		22.861	TOTAL		21.147

PERCENT DIFFERENCE = 3.90

PROCESS DATE IS 02-03-77

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY

STATION NUMBER 09306235 CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395422 LONGITUDE 1083156 DRAINAGE AREA 8.61 DATUM 6980.00 STATE 08 COUNTY 103

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

PRELIMINARY DATA SUBJECT TO REVISION

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	120 .22	120	39 .07	90 .20	90	22 .05	2.0 .04	2	.01
2	90	90	22 .05	90	90	22 .05	1.0	1	0
3	90 .20	90	22 .05	90	90	22 .05	1.0	1	0
4	90 .20	90	22 .05	90 .20	90	22 .05	1.0	1	0
5	90 .20	90	22 .05	70 .17	70	13 .04	1.0	1	0
6	90	90	22 .05	60 .18	60	9.7 .03	1.0	1	0
7	90	90	22 .05	60	60	9.7 .03	1.0 .01	1	0
8	90	90	22 .05	60	60	9.7 .03	1.0 .01	1	0
9	70	70	13 .04	60	60	9.7 .03	1.0 .01	1	0
10	70	70	13 .04	60 .16	60	9.7 .03	0	0	0
11	70	70	13 .04	60 .18	60	9.7 .03	0	0	0
12	90	90	22 .05	60 .18	60	9.7 .03	0	0	0
13	90	90	22 .05	40 .16	40	4.3 .02	0	0	0
14	90	90	22 .05	40	40	4.3 .02	0	0	0
15	90 .20	90	22 .05	40 .16	40	4.3 .02	0	0	0
16	60 .18	60	9.7 .03	40 .16	40	4.3 .02	0	0	0
17	60	60	9.7 .03	40	40	4.3 .02	0	0	0
18	60	60	9.7 .03	40	40	4.3 .02	0	0	0
19	60	60	9.7 .03	40	40	4.3 .02	0	0	0
20	60 .18	60	9.7 .03	60	60	9.7 .03	0	0	0
21	60 .18	60	9.7 .03	40 .16	40	4.3 .02	0	0	0
22	60 .18	60	9.7 .03	40	40	4.3 .02	0	0	0
23	60	60	9.7 .03	40	40	4.3 .02	0	0	0
24	90	90	22 .03	30	30	2.4 .01	0	0	0
25	60	60	9.7 .03	12	12	.39 0	0	0	0
26	60	60	9.7 .03	8.0 .11	8	.17 0	0	0	0
27	60	60	9.7 .03	5.0	5	.07 0	0	0	0
28	70	70	13 .04	4.0	4	.04 0	0	0	0
29	90	90	22 .05	3.0	3	.02 0	0	0	0
30	90	90	22 .05	2.0	2	.01 0	0	0	0
31	90 .20	90	22 .05	---	---	---	0	0	0
TOTAL	2410	---	527.7	1374.0	---	224.70	10.00	---	.01
	5.96		1.29	4.71		0.69	0.19		0

PROCESS DATE IS 02-03-77

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY

STATION NUMBER 09306235 CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395422 LONGITUDE 1083156 DRAINAGE AREA 8.61 DATUM 6980.00 STATE 08 COUNTY 103

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

PRELIMINARY DATA SUBJECT TO REVISION

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1							0	---	---
2							0	---	---
3							0	---	---
4							0	---	---
5							0	---	---
6							0	---	---
7							0	---	---
8							0	---	---
9							0	---	---
10							0	---	---
11							0	---	---
12							0	---	---
13							2.0 .04	2	.01
14							2.0 .04	2	.01
15							2.0 .04	2	.01
16							1.0 .01	1	0
17							1.0 .01	1	0
18							1.0 .01	1	0
19							1.0 .02	1	0
20							0	---	---
21							0	---	---
22							0	---	---
23							0	---	---
24							0	---	---
25							0	---	---
26							0	---	---
27							0	---	---
28							0	---	---
29							1.0 .01	1	0
30							1.0 .02	1	0
31							1.0 .01	1	0
TOTAL	0	0	0	0	0	0	13.00	---	---
							0.21		0

PROCESS DATE IS 02-03-77

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY

STATION NUMBER 09306235 CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395422 LONGITUDE 1083156 DRAINAGE AREA 8.61 DATUM 6980.00 STATE 08 COUNTY 103

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

PRELIMINARY DATA SUBJECT TO REVISION

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	---	---	1.0 .03	1	0	25 .11	25	1.7 .01
2	0	---	---	2.0 .04	2	.010	120 .32	120	39 .07
3	2.0 .05	2	.010	1.0 .02	1	0	440 [illegible]	440	523 .38
4	1.0 .01	1	0	1.0 .01	1	0	750 [illegible]	750	1520 .77
5	1.0 .3	1	0	2.0 .06	2	.010	950 [illegible]	950	2440 1.0
6	1.0 .03	1	0	1.0 [illegible]	1	0	750 [illegible]	750	1520 .77
7	2.0 .04	2	.010	2.0 [illegible]	2	.010	3200 [illegible]	3200	27600 5.2
8	1.0 .02	1	0	1.0 [illegible]	1	0	4000 [illegible]	4000	43200 6.1
9	1.0 .01	1	0	1.0 [illegible]	1	0	3200	3200	27600 5.2
10	1.0 .01	1	0	1.0 .02	1	0	3200 [illegible]	3200	27600 5.2
11	1.0 .02	1	0	1.0 .02	1	0	1200 [illegible]	1200	3890 1.4
12	1.0 .02	1	0	1.0 .03	1	0	1450 [illegible]	1450	5680 1.6
13	1.0 .01	1	0	1.0 .02	1	0	750 [illegible]	750	1520 .77
14	1.0 .03	1	0	1.0 .01	1	0	1200 .44	1200	3890 1.4
15	2.0 .05	2	.010	1.0 .02	1	0	950 .11	950	2440 1.0
16	3.0 .06	3	.020	1.0 .02	1	0	950 .11	950	2440 1.0
17	2.0 [illegible]	2	.010	1.0 .01	1	0	950 [illegible]	950	2440 1.0
18	1.0 [illegible]	1	0	1.0 .02	1	0	950 [illegible]	950	2440 1.0
19	1.0 [illegible]	1	0	1.0 .01	1	0	750	750	1520 .77
20	2.0 .04	2	.010	1.0 .02	1	0	750 [illegible]	750	1520 .77
21	2.0 .04	2	.010	2.0 .04	2	.010	600 [illegible]	600	972 .57
22	2.0 .01	2	.010	1.0 .02	1	0	290 [illegible]	290	227 .22
23	1.0 [illegible]	1	0	1.0 [illegible]	1	0	120 [illegible]	120	39 .07
24	2.0 [illegible]	2	.010	1.0 [illegible]	1	0	90 [illegible]	90	22 .05
25	1.0 [illegible]	1	0	1.0 [illegible]	1	0	90 [illegible]	90	22 .05
26	1.0 [illegible]	1	0	1.0 .01	1	0	90 [illegible]	90	22 .05
27	2.0 [illegible]	2	.010	1.0 [illegible]	1	0	90 [illegible]	90	22 .05
28	1.0 [illegible]	1	0	4.0 .07	4	.040	90 [illegible]	90	22 .05
29	1.0 [illegible]	1	0	4.0 [illegible]	4	.040	60 [illegible]	60	9.7 .03
30	2.0 [illegible]	2	.010	4.0 [illegible]	4	.040	90 [illegible]	90	22 .05
31	---	---	---	5.0 .10	5	.070	---	---	---
TOTAL	40.00	---	.12	48.0	---	.23	28145	---	161203.4
	0.87		0	0.93		0			37.60

PROCESS DATE IS 02-03-77

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY

STATION NUMBER 09306235 CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395422 LONGITUDE 1083156 DRAINAGE AREA 8.61 DATUM 6980.00 STATE 08 COUNTY 103

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

PRELIMINARY DATA SUBJECT TO REVISION

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	120 .22	120	39 .07	120 .22	120	39 .07	90 .17	90	22 .11
2	120	120	39 .07	170 .24	170	78 .11	60 .14	60	9.7 .07
3	120	120	39 .07	170 .24	170	78 .11	60 .14	60	9.7 .07
4	120	120	39 .07	350 .50	350	331 .25	35	35	3.3 .04
5	120	120	39 .07	50 .11	50	6.8 .06	22	22	1.3 .02
6	120 .22	120	39 .07	60 .14	60	9.7 .07	15	15	.61 .01
7	90 .20	90	22 .05	60 .14	60	9.7 .07	12 .20	12	.39 .01
8	60 .16	60	9.7 .03	60 .14	60	9.7 .07	22	22	1.3 .02
9	120 .22	120	39 .07	55 .13	55	8.2 .06	35	35	3.3 .04
10	40 .16	40	4.3 .02	50 .12	50	6.8 .06	90 .17	90	22 .11
11	25 .14	25	1.7 .01	50 .11	50	6.8 .06	115	115	36 .16
12	10 .12	10	.27 0	50 .11	50	6.8 .06	115	115	36 .16
13	10 .12	10	.27 0	50 .11	50	6.8 .06	115	115	36 .16
14	5.0 .10	5	.07 0	60 .14	60	9.7 .07	115	115	36 .16
15	5.0 .10	5	.07 0	90 .17	90	22 .11	115 .50	115	36 .16
16	25 .14	25	1.7 .01	60 .14	60	9.7 .07	115 .50	115	36 .16
17	25 .14	25	1.7 .01	50 .11	50	6.8 .06	115 .50	115	36 .16
18	10 .12	10	.27 0	50	50	6.8 .06	115	115	36 .16
19	5.0 .10	5	.07 0	60	60	9.7 .07	90 .17	90	22 .11
20	25 .14	25	1.7 .01	90 .17	90	22 .11	50	50	6.8 .06
21	25 .14	25	1.7 .01	90 .17	90	22 .11	50 .11	50	6.8 .06
22	25 .14	25	1.7 .01	115	115	36 .16	35	35	3.3 .04
23	40 .16	40	4.3 .02	115	115	36 .16	35	35	3.3 .04
24	40 .16	40	4.3 .02	115	115	36 .16	22	22	1.3 .02
25	60 .18	60	9.7 .03	115	115	36 .16	35	35	3.3 .04
26	90 .20	90	22 .05	115	115	36 .16	35	35	3.3 .04
27	90	90	22 .05	140 .53	140	53 .20	35	35	3.3 .04
28	120	120	39 .07	140	140	53 .20	35	35	3.3 .04
29	120	120	39 .07	140	140	53 .20	35	35	3.3 .04
30	170	170	78 .11	115	115	36 .16	35	35	3.3 .04
31	170	170	78 .11	90 .17	90	22 .11	---	---	---
TOTAL	2125.0	---	616.52	3045	---	1103.0	1853	---	424.90
	5.40		1.18	13.42		3.47	12.58		2.35
YEAR	~~39063.40~~		~~16410076~~						

Total tons for 1975 W.Yr. = 46.58 Tons

Closed 010 Box Elder County

GEOLOGICAL SURVEY
Sediment

District

Dry Fork Nr Rangely 1976 WY 09306235

Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
3-1	.02		1.00		.01	Tons/day						
18	.04				.02							
22	.15				.08							
23	.41				.25							
24	.60				.60							
31	.32				.20							
			Mar.			1.16	Tons					
				PRELIMINARY DATA SUBJECT TO REVISION								
4-1	.34		1.00		.20							
2	.21				.12							
3	.04				.02							
			April			0.34	Tons					
6-17	.03				.02							
			June			0.02	Tons					

Total Tonnage for 1976 WY = 1.52 Tons

Sediment.

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

PRELIMINARY DATA SUBJECT TO REVISION

09306235 Canal 61 blow Water 61. 1976 Water "

1975 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		1975 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Oct. 1	.38		1.0	F35	.04		Nov. 1	.32		1.0 F	270	.23
								.32			270	.23
								.32			270	.23
								.32			260	.25
5							5	.24			310	.28
								.33			280	.25
	.33			35	.04			.32			270	.23
	.41			50	.06			.33			280	.25
	.44			70	.08			.34			310	.28
10	.44			70	.08		10	.34			320	.31
	.47			90	.11			.39			380	.40
	.47			90	.11			.39			380	.40
	.47			90	.11			.37			340	.34
	.47			90	.11			.35			320	.30
15	.44			70	.08		15					.30
	.47			90	.11							.30
	.47			90	.11							.30
	.50			110	.15							.30
	.47			90	.11			.35			320	.30
20	.47			90	.11		20	.30			230	.19
	.44			70	.08			.25			160	.11
	.36			30	.03			.18			90	.04
	a .25			10	.01			.15			70	.03
	b .28			200	.15			.10			30	.01
25	.33			280	.25		25	.05			10	T
	.33			280	.25			.02			2	T
	.33			280	.25			.03			4	T
	.35			300	.28			.04			6	T
	.36			320	.31			.03			4	T
	.36			320	.31		30	.03			4	T
31	b .35			300	.28		X				X	X
					3.81							5.86

1 of 6

T = trace ⇒ < .01 Tons/day

Sed.

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

09306235

PRELIMINARY DATA SUBJECT TO REVISION

1976 WY

1975 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Dec. 1	.03		1.0 E	5	T		Jan 1	.03		1.0 E	5	T
	.04			5								
	.04			5								
	.04			5								
5	.05			10			5	.03				
	.05			10				.02				
	.05			10				.02				
	.06			10				.02				
								.01				
10							10	.01			5	T
								0			0	0
	.06											
	.07											
	.06											
15	.05						15					
	.05			10								
	.04			5								
20							20					
	.04											
25	.03						25					
31	.03			5	T		31	0			0	0
Total					.03							T

T => < .01 Tons/Day

S.cd.

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PRELIMINARY DATA SUBJECT TO REVISION

File No. { Washington ..... District .....

09306 235

1976 W.

1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Feb 1	0			0	0		Mar. 1	0			0	0
							5					
							10					
							15					
							20					
								0			0	0
								.02			320	.02
								.06			2000	.32
								.19			7000	3.6
							25	.05			[illegible]	.68
								0			0	0
29	0			0	0							
								0			0	0
							31	.02			[illegible]	1.5
Total					0							6.12

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

PRELIMINARY DATA SUBJECT TO REVISION

09306235 1976 w

1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Apr. 1	.38		1.0 E	16,000	16		May 1	.07		1.0 E	15	T
	.35			12,000	11						15	
	.25			10,000	6.8						15	
	.21			10,000	5.7						15	
5	.27	(20200)		8,000	5.8		5				15	
	.35			1,000	.94			.07			15	
	.50			3,000	4.0			.06			10	
	.38			1,500	1.5			.06			10	
	.24			400	.26			.05			10	
10	.20			250	.14		10	.04			10	
	.12			40	.01						10	
	.10	-	-	30	.01						10	
	.08			20	T						10	
	.08			20	T			.04			10	
15	.08			20	T		15	.03			10	
	.08			20	T			.04			10	
	.08			20	T			.03			10	
	.09			25	.01			.04			10	
	.10			30	.01			.05			10	
20	.24	(25)		150	.10		20	.06			10	
	.24			150	.10			.07			15	T
	.24			150	.10			.08			20	T
	.24			150	.10			.09			25	.01
	.22			130	.08			.09			25	.01
25	.22			130	.08		25	.10			30	.01
	.20			110	.06			.03			20	T
	.16			80	.03			.07			15	
	.14			60	.02			.06			10	
	.10			30	.01			.06			10	
30	.10			30	.01			.03			20	
							31	.07			15	T
Total					52.89							.09

4 of 6

+.03

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

PRELIMINARY DATA SUBJECT TO REVISION

09306235 1976 wy

1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
June 1	.07		1.0 E	15	T		July 1	.10		1.0 E	30	.01
				15				.05			10	T
				15				.06			10	
	.07			15				.07			15	
5	.06			10			5	.06			10	
	.07			15				.06			10	
	.06			10				.07			15	
	.06			10				.05			10	
	.04			10				.05			10	
10	.04			10			10	.05			10	
	.03			10				.06			10	
	.08			20				.06			10	
	.07			15	T			.07			15	
	.09			25	.01			.07			15	
15	.08			20	T		15	.06			10	
	.08			20	T			.07			15	
	.14			60	.02			.07			15	
	.10			30	.01			.08			20	
	.12			45	.01			.07			15	
20	.10			30	.01		20	.07			15	
	.10			30	.01			.05			20	T
	.12			45	.01			.12			45	.01
	.10			30	.01			.16			70	.03
	.12			45	.01			.18			90	.04
25	.14			60	.02		25	.22			130	.08
	.12			45	.01			.22			130	.08
	.12			45	.01			.22			130	.08
	.12			45	.01			.22			130	.08
	.14			60	.02			.20			110	.06
30	.14			60	.02			.22			130	.08
							31	.22			130	.08
					0.22							0.67

5 of 6

U.S. GOVERNMENT PRINTING OFFICE

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
PRELIMINARY DATA SUBJECT TO REVISION

File No. { Washington ..... District .....

09306 235 1976 W.Yr

Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Aug. 1	.24		1.0 F	150	.10		Sept. 1	.24		1.0 F	60	.04
	.24			140	.09							
	.24			110	.07							
	.24			90	.06							
5	.24			70	.05		5					
	.20			40	.02							
	.22			50	.03			.24			60	.04
	.24			60	.04			.22			50	.03
	.24			60	.04			.22			50	.03
10	.24			60	.04		10	.24			60	.04
	.24			60	.04			.22			50	.03
	.22			50	.03			.22			50	.03
					.03			.20			40	.02
					.03			.18			35	.02
15					.03		15				35	.02
					.03						35	.02
					.03			.18			35	.02
					.03			.20			40	.02
	.22			50	.03							.02
20	.24			60	.04		20					.02
	.24			60	.04							.02
	.24			60	.04							.02
	.26			70	.05			.20			40	.02
	.26			70	.05			.22			50	.03
25	.24			60	.04		25	.22			50	.03
	.26			70	.05			.20			40	.02
	.26			70	.05							.02
	.24			60	.04							.02
	.24			60	.04							.02
	.24			60	.04		30	.20			40	.02
31	.24			60	.04		X				X	X
					1.34							0.82

6 of 6

Total tonnage for 1976 W.Yr = 71.85 Tons

U.S. GOVERNMENT PRINTING OFFICE : 1965—O-703-759 857-606

Sediment!

09306240

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

PRELIMINARY DATA SUBJECT TO REVISION

Box Elder Gl. Mt. Ranger — 1976 Water Year.

1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load — Tons/day		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Feb. 1	0		1.0		0		Mar 1	.04		1.0		E .02
								.03				E .01
								.01				E T
								0				0
5							5					
10							10	0				0
								.04				E .02
	0				0			.10				.05
	.01			--	E T			.08				.04
	.01			--	T			.06				.03
15	.01			--	T	.02	15	.06				.03
	.01			--	T			.10				.05
	.01			--	E T			.14				E .07
	0				0			.40	200		200	.22
								.02	15		15	T
20							20	0				0
								0				0
								.11				E .06
								.08				E .04
								.29				E .18
25	0				0		25	0				0
	.02			--	E .01							
	.04			--	.02							
	.06			--	.03							
29	.05		1.0	--	E .02							
	--							0				0
							31	.14		1.0		E .07
Total					0.10	Tons						0.89 T

PRELIMINARY DATA SUBJECT TO REVISION

Computed by ...

Copied ...

Sediment.
09306240

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

PRELIMINARY DATA SUBJECT TO REVISION

Box Elder Gulch near Rangely - 1976 W.Yr.

1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
April 1	0.45		1.0		E 0.30		May 1	0				0
	.28				.16							
	.12				.06							
	.01		1.0		E T							
5	0				0		5					
								0				0
								.12		1.0		E .06
								.32				.19
								.50				.40
10							10	.38				.24
								.06				.03
								.66				.85
								.82				1.4
								.72				1.0
15							15	.79				1.3
								.86				1.6
								.82				1.4
								.79				E 1.3
								.72			390	.72
20							20	.63			480	.82
								.66			440	.78
								.63			210	.36
								.56			260	.39
								.50			260	.35
25							25	.50			510	.69
								.45			260	.32
								.38			260	.27
								.32			170	.15
								.32			220	.24
30	0				0			.32			200	.24
							31	.32		1.0	190	.16
					0.52	Tons						15.3

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { District .....

Box Elder Gulch 09306240 76 WY.

Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
6-1	0.25		1.00	90	0.06							
	.25			230	.16							
	.28			100	.08							
	.24			E	.14							
5	.19				.10							
	.12				.06							
	.08				.04							
	.05			E	.02							
	.04			110	.01							
10	.04			160	.02							
	.04			280	.03							
	.06			160	.03							
	.04			200	.02							
	.07			260	.05							
15	.07			120	.02							
	.07			220	.02							
	.11			430	.13							
	.03			90	.01							
	.03			120	.01							
20	.02			260	.01							
	.01			E	T							
	.04				.02							
	.02				.01							
	.04				.02							
25	.02		1.0	E	.01							
	0				0							
30	0				0							
Total					1.08	Tons		Total	Tonnage for [illegible]			

PRELIMINARY DATA SUBJECT TO REVISION

WFC 2/5/77

9-280

Sediment
09306242

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

Corral Cl. nr. Rangela — 1976 W.Yr.

1975 Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		1975 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
10-1	.54	60	.30	18	.03		11-1	.63		.50	E 15	.03
10-2	.54	53		16	.02		11-2	.63			E 15	.03
10-3	.54	52		16	.02		11-3	.63			E 15	.03
10-4	.50	47		14	.02		11-4	.63			E 15	.03
10-5	.50	50		15	.02		11-5	.63			E 15	.03
10-6	.50	45		14	.02		11-6	.68			E 20	.04
10-7	.50	45		14	.02		11-7	.68			E 25	.05
10-8	.50	61		18	.02		11-8	.68			E 30	.06
10-9	.54	70		21	.03		11-9	.68			E 35	.06
10-10	.54	63		19	.03		11-10	.63			E 35	.06
10-11	.54	72		22	.03		11-11	.63			E 40	.07
10-12	.54	50		15	.02		11-12	.58			E 45	.07
10-13	.54	52		16	.02		11-13	.58			E 50	.08
10-14	.54	29	.30	9	.01		11-14	.58	114	.50	57	.09
10-15	.54	40	.40	16	.02		11-15	.58	105	.60	63	.10
10-16	.54	34		14	.02		11-16	.58	50		30	.05
10-17	.54	39		16	.02		11-17	.58	53		32	.05
10-18	.54	65		26	.04		11-18	.58	96		58	.09
10-19	.54	30		12	.02		11-19	.54	107		64	.09
10-20	.54	22		9	.01		11-20	.50	112		67	.09
10-21	.54	44		18	.03		11-21	.50	70		42	.06
10-22	.54	32		13	.02		11-22	.46	87		52	.06
10-23	.54	28		11	.02		11-23	.46	81		49	.06
10-24	.54	30		10	.01		11-24	.46	91		55	.07
10-25	.54			E 10	.01		11-25	.46	85		51	.06
10-26	.58			10	.02		11-26	.46	80		48	.06
10-27	.63			10	.02		11-27	.46	90		46	.06
10-28	.63			10	.02		11-28	.46	82		49	.06
10-29	.58			E 10	.02		11-29	.50	83		50	.07
10-30	.58	20		8	.01		11-30	.50	80	.60	48	.06
10-31	.58		.40	E 15	.03		X	X				
Total					0.65							1.52

9-330

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

09306242 Corral Gulch

PRELIMINARY DATA SUBJECT TO REVISION

1976 W.Q.r

1975 Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
12-1	.50	62	.70	43	.06		1-1	.50	.99	.90	89	.12
12-2	.50	50		35	.05		1-2	.50	E 95		E 86	.12
12-3	.50	44		31	.04		1-3	.50	E 90		81	.11
12-4	.50	30		21	.03		1-4	.50	E 90		81	.11
12-5	.50	30		21	.03		1-5	.46	E 85		76	.09
12-6	.46	100		70	.09		1-6	.46	E 80		72	.09
12-7	.46	92		64	.08		1-7	.46	E 75		68	.08
12-8	.46	88		62	.08		1-8	.46	E 75		68	.08
12-9	.46	92		64	.08		1-9	.46	70	.90	63	.08
12-10	.46	95		66	.08		1-10	.43	120	1.00	120	.14
12-11	.46	90		63	.08		1-11	.40	155		155	.17
12-12	.46	78		55	.07		1-12	.43	118		118	.14
12-13	.46	81		57	.07		1-13	.40	100		100	.11
12-14	.46	50		35	.04		1-14	.40	150		150	.16
12-15	.46	45	.70	32	.04		1-15	.40	150		150	.16
12-16	.46	55	.80	44	.05		1-16	.36	145		145	.14
12-17	.46	68		54	.07		1-17	.31	143		143	.12
12-18	.46	102		82	.10		1-18	.31	128		128	.11
12-19	.46	96		77	.10		1-19	.36	110		110	.11
12-20	.46	73		58	.07		1-20	.36	88		88	.09
12-21	.46	72		58	.07		1-21	.36	95		95	.09
12-22	.46	50		40	.05		1-22	.36	138		138	.13
12-23	.46	60		48	.06		1-23	.36	130		130	.13
12-24	.50	62		50	.07		1-24	.40	120		120	.13
12-25	.50	71	.80	57	.08		1-25	.40	95		95	.10
12-26	.50	72	.90	65	.09		1-26	.40	70		70	.08
12-27	.50	72		65	.09		[illegible]	.43	40		40	.05
12-28	.50	80		72	.10		1-28	.43	15		15	.03
12-29	.50	91		82	.10		1-29	.43	18		18	.03
12-30	.50	80		72	.09		1-30	.43	60		60	.07
12-31	.50	92	.90	83	.10		1-31	.43	70	1.00	70	.08
Total					2.21							3.23

PRELIMINARY DATA SUBJECT TO REVISION

9-280

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

09306242 Corral Gulch PRELIMINARY DATA SUBJECT TO REVISION 1976 wy r.

Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
4-1	1.3	s 11300	1.0	s 11300	177		5-1	.50	48	1.0		.06
4-2	1.6	s 15600		s 15600	240		5-2	.50	84			.11
4-3	1.3	s 10400		s 10400	130		5-3	.46	40			.05
4-4	.89	s 5700		s 5700	44		5-4	.46	50			.06
4-5	.63	102	→		.17		5-5	.46	62			.08
4-6	.58	108			.17		5-6	.46	66			.08
4-7	.56	60			.09		5-7	.54	100			.15
4-8	.54	65			.09		5-8	.50	120			.16
4-9	.54	46			.07		5-9	.46	120			.15
4-10	.54	44			.06		5-10	.46	90			.10
4-11	.54	38			.06		5-11	.43	56			.07
4-12	.54	20			.03		5-12	.43	40			.05
4-13	.54	19			.03		5-13	.54	170			.25
4-14	.58	28			.04		5-14	.58	180			.28
4-15	.54	21			.03		5-15	.68	180			.33
4-16	.58	110			.17		5-16	.68	390			.72
4-17	.63	177			.30		5-17	.68	410			.75
4-18	.68	180			.33		5-18	.73	325			.64
4-19	.68	130			.24		5-19	.84	500			1.1
4-20	.68	107			.20		5-20	1.0	640			1.7
4-21	.63	82			.14		5-21	1.0	760			2.0
4-22	.58	90			.14		5-22	1.0	840			2.3
4-23	.58	40			.06		5-23	1.0	540			1.5
4-24	.54	99			.14		5-24	1.0	850			2.3
4-25	.54	65			.09		5-25	.94	620			1.4
4-26	.58	70			.11		5-26	.94	556			1.4
4-27	.54	50			.07		5-27	.68	695			1.3
4-28	.54	46			.07		5-28	.58	535			.84
4-29	.50	90			.12		5-29	.54	480			.58
4-30	.50	70	1.0		.09		5-30	.58	330			.52
x	x	x	x				5-31	.53	220	1.0		.37
Total					594.11							21.40

-230

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

09306242 Corral Gulch

PRELIMINARY DATA SUBJECT TO REVISION

1976 W.Yr.

Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
2-1	.40	10	1.0	10	.01		3-1	1.4	s 5320	1.0	s 5320	56
2-2	.40	6		6	.01		3-2	.50	162	1.0	162	.22
2-3	.40	30		30	.03		3-3	.43	71	1.0	71	.08
2-4	.40	100		100	.11		3-4	.46	75	1.0	75	.09
2-5	.36	35		35	.03		3-5	.43	67	.9	60	.07
2-6	.36	10		10	.01		3-6	.40	60	.9	54	.06
2-7	.36	16		16	.02		3-7	.43	70	.8	56	.07
2-8	.36	26		26	.03		3-8	.40	48	.8	38	.04
2-9	.88	s 673		s 673	3.0		3-9	.40	60	.8	48	.05
2-10	.84	440		440	1.0		3-10	.36	35	.7	24	.02
2-11	.73	300		300	.59		3-11	.40	21	.7	15	.02
2-12	.73	360		360	.71		3-12	.40	46	.7	32	.03
2-13	.68	345		345	.63		3-13	.36	70	.7	49	.05
2-14	.68	500		500	.92		3-14	.36	61	.6	37	.04
2-15	.54	170		170	.25		3-15	.36	35	.6	21	.02
2-16	.54	27		27	.04		3-16	.36	123	.6	74	.07
2-17	.54	15		15	.02		3-17	.46	2500	1.0	2500	3.1
2-18	.54	33		33	.05		3-18	2.1	s 9570		s 9570	162
2-19	.58	28		28	.04		3-19	.40	150		150	.16
2-20	.54	65		65	.09		3-20	.40	105		105	.11
2-21	.54	63		63	.09		3-21	.40	150		150	.16
2-22	.54	37		37	.05		3-22	.40	50		50	.05
2-23	.54	40		40	.06		3-23	.40	110		110	.12
2-24	.58	82		82	.13		3-24	.58	s 6230		s 6230	30
2-25	.58	99		99	.16		3-25	.36	185		185	.18
2-26	[illegible]	290		290	.49		3-26	.40	170		170	.18
2-27	1.3	s 5050		s 5050	65		3-27	.31	68		68	.06
2-28	1.0	s 5000		s 5000	33		3-28	.31	99		99	.08
[illegible]	1.2	s 4000	1.0	4000	57		3-29	.31	50		50	.04
							3-30	.24	45		45	.04
							3-31	.31	128	1.0	128	.11
Total					143.57							253.32

9-280

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

09306242 Corral Gulch PRELIMINARY DATA SUBJECT TO REVISION

1976 W.Yr

Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
6-1	.54	150	1.0 →		.22		7-1	.68	128	1.0		.24
6-2	.46	74			.09		7-2	.68	140			.26
6-3	.46	60			.07		7-3	.68	180			.33
6-4	.46	180			.22		7-4	.68	200			.37
6-5	.40	140			.15		7-5	.73	160			.32
6-6	.40	50			.05		7-6	.73	100			.20
6-7	.40	30			.03		7-7	.74	90			.18
6-8	.36	40			.04		7-8	.75	60			.12
6-9	.36	180			.17		7-9	.76	80			.16
6-10	.36	230			.22		7-10	.76	80			.16
6-11	.36	140			.14		7-11	.77	70			.15
6-12	.40	86			.09		7-12	.77	70			.15
6-13	.43	100			.12		7-13	.78	50			.11
6-14	.43	170			.20		7-14	.79	90			.19
6-15	.46	160			.20		7-15	.68	100			.18
6-16	.50	130			.18		7-16	.73	90			.18
6-17	.68	155			.26		7-17	.79	150			.32
6-18	.68	105			.19		7-18	.94	100			.25
6-19	.63	120			.20		7-19	.94	70			.18
6-20	.58	80			.13		7-20	.99	40			.10
6-21	.58	70			.11		7-21	1.0	35			.09
6-22	.73	64			.13		7-22	1.0	75			.20
6-23	.73	50			.10		7-23	1.0	88			.24
6-24	.73	50			.10		7-24	1.0	95			.26
6-25	.73	50			.10		7-25	1.0	100			.27
6-26	.72	120			.23		7-26	.0	72			.19
6-27	.7	60			.12		7-27	.94	70			.18
6-28	.70	100			.19		7-28	.94	62			.16
6-29	.70	70			.13		7-29	.94	60			.15
6-30	.7	64	1.0		.12		7-30	.9	64			.15
x	x						7-31	.94	88	1.0		.22
Total					4.30							6.26

D-230

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

PRELIMINARY DATA SUBJECT TO REVISION

09306242 Corral Gulch

1976 wyr

Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
9-1	1.0	104	1.0		.28		9-1	.43	58	1.0		.07
8-2	1.0	122			.33		9-2	.46	58			.07
8-3	1.0	120			.32		9-3	.43	46			.05
8-4	1.0	140			.38		9-4	.43	60			.07
8-5	.94	160			.41		9-5	.43	44			.05
8-6	.94	128			.32		9-6	.43	40			.05
8-7	.84	122			.28		9-7	.46	36			.04
8-8	[illegible]	126			.30		9-8	.46	20			.02
8-9	.89	134			.32		9-9	.46	40			.05
8-10	.84	138			.33		9-10	.50	40			.05
8-11	.89	120			.29		9-11	.46	38			.05
8-12	.84	110			.25		9-12	.50	36			.05
8-13	.84	92			.21		9-13	.50	20			.03
[illegible]	.79	86			.18		9-14	.50	62			.08
[illegible]	.68	100			.18		9-15	.50	80			.11
[illegible]	.63	70			.12		9-16	.46	60			.07
[illegible]	.63	80			.14		9-17	.46	82			.10
[illegible]	.63	62			.11		9-18	.43	108			.13
8-19	.58	50			.08		[illegible]	[illegible]	62			.07
[illegible]	.54	70			.10		[illegible]	[illegible]	38			.04
[illegible]	.54	62			.09		9-21	.36	28			.03
[illegible]	.50	60			.08		9-22	.36	56			.05
	.50	50			.07		[illegible]	.31	50			.05
[illegible]	.46	28			.03		[illegible]	.36	20			.02
	.50	58			.08		9-25	.36	20			.03
[illegible]	[illegible]	106			.15		[illegible]	.36	24			.02
[illegible]	[illegible]	126			.17		9-27	.31	18			.02
[illegible]	[illegible]	94			.13		9-28	.29	20			.02
[illegible]	[illegible]	76			.09		[illegible]	.29	19			.01
[illegible]	[illegible]	72			.09		[illegible]	.29	20	1.0		.02
[illegible]	.46	62	1.0		.08		X	X				.52
					5.99							

Total [illegible] = 1033.[illegible]

GEOLOGICAL SURVEY

District

Stove Springs Draw nr Ringley 09306230 76W

Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
2-12	0.04		1.00	6	0.02	Tons/day						
13	.01			16	.01							
14	.34			122	.62							
15	.25			E	.50							
		PRELIMINARY DATA SUBJECT TO REVISION										
2-26	.11			E	0.17							
27	.84				2.4							
28	1.5				5.5							
29	1.4			E	5.0							
			Feb.			14.22						
3-1	1.4			E	5.0							
3-18	1.2			E	4.0							
19	.73			E	2.0							
			Mar			11.0						
		Total Tons for 1976 wyr. = 25.22 Tons										

urc 2/8/77

9-230

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PRELIMINARY DATA SUBJECT TO REVISION

File No. { Washington ..... District .....

09306255 Yellow Cr. nr. White R. Colo 1976 Wyr.

1975 Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		1975 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Oct. 1	1.2	140	0.35	49	.16		Nov. 1	2.9	238	1.0		1.9
	1.1	138		48	.14			2.1	255			1.4
	1.2	125		44	.14			1.7	385			1.8
	1.1	114		40	.12			1.7	370			1.7
5	1.1	105		37	.11		5	1.4	380			1.4
	1.1	100		35	.10			1.4	445			1.7
	1.1	79		28	.08			1.4	399			1.5
	1.2	75		26	.09			[illegible]	300			1.4
	1.1	85		30	.09			[illegible]	230			.99
10	1.1	68		24	.07		10	1.3	370			1.2
	.96	79		28	.07			1.2	410			1.3
	.95	63		22	.06			1.1	375			1.1
	1.0	61		21	.06			1.2	410			1.3
	1.1	70		24	.07			1.3	479			1.7
15	.92	240		86	.23		15	1.4	456			1.7
	1.0	205		72	.19			1.2	420			1.4
	1.0	62		22	.06			1.4	400			1.5
	1.0	72		25	.07			1.3	390			1.4
	.92	100		35	.09			1.1	485			1.4
20	.92	111		39	.10		20	1.2	415			1.5
	.92	106		37	.10			1.8	270			1.3
	1.1	170		60	.18			1.1	240			.71
	1.3	455		150	.54			1.1	315			.92
	1.1	495		173	.51			1.2	240			.78
25	1.2	[illegible]		150	.52		25	[illegible]	[illegible]			.96
	1.4	475		166	.63			.93	250			.61
	[illegible]	[illegible]		150	.60			1.9	[illegible]			.75
	[illegible]	[illegible]		141	.53			[illegible]	200			[illegible]
	1.2	[illegible]		98	.33			[illegible]	125			.45
30	[illegible]	[illegible]	0.35	48	.15		30	[illegible]	115	1.0		.34
31	[illegible]	[illegible]	1.0	10,[illegible]	170			X			X	X
					176.20							37.09

1976

Coefficients based on [illegible] and [illegible]

9-330

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

PRELIMINARY DATA SUBJECT TO REVISION

09306255 Yellow Cr. nr. White R. Colo 1976 WY

1975 Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Decl.	1.1	175	1.0		.52		Jan 1	.90		1.0		E 1.0
	1.3	100			.35			.85				.9
	2.0	185			1.0			.90				1.0
		400			2.2			1.0				1.2
5					E 1.5			1.1				1.4
					1.5							1.6
	2.0				1.5							1.[illegible]
	1.8				1.3							1.[illegible]
	1.4				1.1							[illegible]
10	1.5				1.0							[illegible]
	1.[illegible]				.9							[illegible]
	1.[illegible]				.9							[illegible]
	1.3				.8			1.1				1.[illegible]
	1.3				.8			1.2				1.7
15	1.3				.8							[illegible]
	1.4				.9							1.[illegible]
	1.4				.9							[illegible]
	1.1				.6							1.[illegible]
	1.0				.5							[illegible]
20	1.0				.5							1.[illegible]
	1.1				.6			1.2				1.[illegible]
	1.3				.8			1.3				1.9
	1.5				1.0							1.0
	1.5				1.0							1.0
27	1.[illegible]				1.0			1.3				1.9
	1.3				.8			1.[illegible]				2.1
	[illegible]				.6			1.[illegible]				E 2.1
	.93				.4			1.[illegible]	500		500	2.4
	1.0				.5							[illegible]
	1.3				.8							[illegible]
31	[illegible]		1.0		E .5		31	1.[illegible]		1.0		2.[illegible]
					27.87							98.[illegible]

2[illegible].6

98.47

9-230

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PRELIMINARY DATA SUBJECT TO REVISION

File No. { Washington ..... District .....

09306255 Yellow Cr. nr. White River 1976 WUR.

1976 Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Feb.1	1.1	1.	1.0		E 1.5		Mar.1	8.1		1.0		E 280
	1				1.5			5.6				110
					1.5			4.5				60
					1.5			3.0				22
5	1.1				1.5		5	[illegible]				22
	1.2				1.7			3.0				22
	1.1				1.5			3.2				25
	1.1				1.5			3.6				35
	1.1				1.5			[illegible]				70
10	[illegible]				2.4		10	[illegible]				55
	[illegible]				3.1			[illegible]				52
	[illegible]				E 3.7			3.0				[illegible]
	[illegible]	E 3500			50			[illegible]				33
	[illegible]	5400			54			[illegible]				E 25
15	[illegible]	950			[illegible]		15	[illegible]	3600			21
	2.4	E 1900			12			[illegible]				E 12
	2.1	2100			12			[illegible]				25
	2.1	1900			11			13				500
	2.0	3000			16			[illegible]				22
20	[illegible]	2100			14		20	[illegible]				19
	[illegible]	2200			11			[illegible]				18
	1.7	2200			10			[illegible]				E 15
	[illegible]	2400			11			[illegible]	2500			18
	[illegible]	2400			12			[illegible]		1.0		E 12
[illegible]	[illegible]	[illegible]			17		25			.8		[illegible]
	[illegible]	7100			67			1.6		.75		4.0
	[illegible]	[illegible]			[illegible]			1.2		.6		[illegible]
	[illegible]	[illegible]			53			[illegible]		[illegible]		[illegible]
29	[illegible]	6500	1.0		51			[illegible]		[illegible]		E [illegible]
								[illegible]	500	.6		[illegible]
							31	[illegible]		[illegible]		[illegible]
					490.4							1852.4

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

09306255 Yellow Cr. nr. White River, Colo. 1976 WY

1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
April 1	1.7				E 2.9		May 1	1.7	E 450	.75	340	1.6
	1.7				2.9			1.6	E 450	.75	340	1.5
	1.9				3.4			1.7	E 500	.75	380	1.7
	2.0				3.7			1.6	700	.75	525	2.3
5	2.1				5.0		5	1.7	E 680	.75	510	2.3
	2.6				5.6			1.8	860	.8	690	3.4
	2.3				4.6			[illegible]	[illegible]	.8	690	3.3
	2.2				E 2.6			[illegible]	980	.8	780	3.8
	2.1	680	1.0		4.0			1.8	[illegible]	.8	650	[illegible]
10	2.1	E 650	.95	650	3.7		10	1.7	[illegible]	.75	660	3.0
	1.9	650	.85	550	2.9			1.7	720	.75	540	2.5
	2.0	500	.90	450	2.4			1.7	500	.75	405	1.9
	2.2	500	1.0	500	3.0			1.6	500	.75	225	1.9
	2.1	500	.95	480	2.7			1.5	610	.7	427	1.7
15	2.1	400	.95	460	2.6		15	1.5	400	.7	420	1.7
	2.0	440	.90	400	2.2			1.4	410	.65	266	1.
	2.0	400	1.0	400	2.0			1.4	450	.65	292	1.1
	2.4	450	1.0	450	2.9			1.3	460	.6	276	2.5
	2.3	E 480	1.0	480	3.1			1.4	500	.65	325	1.2
20	2.0	370	.95	352	1.9		20	1.6	410	.75	337	1.4
	2.0	E 380	.95	360	1.9			1.6	E 450	.75	337	3.7
	2.0	400	.95	380	2.0			1.6	400	.75	300	1.2
	1.9	320	.85	320	1.6			1.6	300	.75	225	0.9
	[illegible]	400	.75	300	1.4			1.5	E 320	.75	240	1.1
25	[illegible]	450	[illegible]	360	1.5		25	[illegible]	125	.75	96	.41
	[illegible]	E 460	.95	440	2.4			[illegible]	140	.7	98	0.3
	[illegible]	440	.85	374	1.9			[illegible]	130	.65	84	0.3
	1.7	E 440	.75	330	[illegible]			1.2	135	.6	81	0.2
	1.7	450	.75	340	1.6			1.2	170	.55	93	0.3
30	1.7	E 450	.75	340	1.6			1.4	205	.65	133	0.5
X				X	X		31	1.2	140	.6	84	0.2
					84.3							63.51

46.6

63.51

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

09306255 Yellow Cr. nr. White R. Co. 1976 WQ

1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
June 1	1.2	128	.55	70.	0.22		July 1	.56	85	0.35	29.	0.04
	(	88	.55	40.	0.10			.56	122		42.	0.06
		87	.55	47.	0.15			.53	110		38.	0.05
	1.2	83	.55	45.	0.14			.47	80		28.	0.03
5	1.1	70	.50	35.	0.10		5	.47	60		21.	0.02
	1.1	74	.50	37.	0.10			.45	135		47.	0.05
	1.1	125	.50	125.	0.37			.41	140		56.	0.06
	1.0	235	.50	117.	0.31			.32	180		63.	0.06
	1.0	[illegible]	.50	72.	0.19			.32	[illegible]		68	0.01
10	.83	170	.25	42.	0.10		10	.35	[illegible]		56.	0.05
	.83	105	.35	36.	0.09			.34	160		56.	0.05
	[illegible]	95	.5	47.	0.12			.31	150		52.	0.02
	[illegible]	185	.5	92.	0.27			.25	170		42.	0.02
	.2	430	.65	279.	1.1			.25	90		31.	0.06
15	[illegible]	100	[illegible]	55.	0.17		15	.25	85		29.	0.05
	[illegible]	80	.50	40.	0.11			.25	90		31.	0.06
	[illegible]	100	.55	55.	0.17			.27	85		29.	0.06
	1.1	105	.50	52.	0.15			.33	80		28.	0.07
	[illegible]	90	.50	45.	0.12			.33	60		21.	0.01
20	[illegible]	85	.35	29.	0.07		20	.30	[illegible]		61.	[illegible]
	[illegible]	70	.35	24.	0.05			.25	[illegible]		43.	0.02
	[illegible]	950	.55	522.	1.7			.24	170		42.	0.02
	1.2	130	.55	71.	0.23			.23	170		42.	0.02
	[illegible]	80	.50	80.	0.21			.23	85		20.	[illegible]
25	.83	[illegible]	.35	18.	0.04		25	.25	100		35.	0.02
	.73	65		22.	0.04			.27	170		42	0.02
	.72	85		30.	0.05			.27	[illegible]		61.	[illegible]
	.70	[illegible]		57.	0.10			.28	[illegible]		71.	[illegible]
	.67	122		42.	0.07			.32	65		22.	0.02
30	[illegible]	190	.35	66	0.10			.24	105		36.	0.03
	[illegible]			[illegible]			31	.21	480	0.35	168.	[illegible]
					6.74							1.37

5%

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

09306255 Yellow Cr. nr. White R., Colo 1976 W.Y.

1976 Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Aug 1.	5.1	s 3900	1.0	s 3900	65		Sept. 1	.59	105	.50	52	.08
	1.7	520	.95	494	2.3			.59	110		55	.09
	1.2	220	.75	165	.53			.59	115		58	.09
	1.1	210	.7	147	.44			.56	205		102	.15
5	.88	115	.6	69	.16		5	.62	145	.50	72	.14
	.80	175	.6	105	.23			.67	190	.55	104	.19
	.80	120	.6	72	.15			.70	175		69	.13
	.93	145	.65	107	.27			.72	[illegible]		80	.16
	1.0	175		88	.22			.73	160	.55	55	.10
10	.93	105		69	.17		10	.73				E .19
	1.0	75		49	.13			.76				.20
	.98	75	.65	49	.13			.80				.30
	.90	80	.6	48	.10			.84				.30
	.76	E 90	.55	50	.10			.85				.34
15	.70	90		50	.09		15	1.5				.54
	.67	90		50	.09			1.5				.54
	.67	100		55	.10			.88				.34
	.67	100		55	.10			.80				.25
	.65	90		50	.09			.76				.20
20	.65	70		38	.07		20	.73				.16
	.65	75		41	.07			.73				.15
	.65	60		33	.06			.76				.20
	.72	65		36	.07			.82				.30
	.77	85		47	.09			1.1				.75
25	.85	150		82	.14		25	1.1				.75
	.79	175		96	.18			.95				[illegible]
	[illegible]	190		105	.21			[illegible]				.30
	[illegible]	150		[illegible]	[illegible]			[illegible]				[illegible]
	[illegible]	140	.55	[illegible]	.14			[illegible]				[illegible]
	[illegible]	[illegible]	.55	[illegible]	[illegible]		30	.93				E .42
31	[illegible]	90	[illegible]	[illegible]	[illegible]			X		X	X	X
					71.75							8.62

6 of 6

YEARLY LOAD (TONS) = 2918.72

Sediment
09306241.i

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington .... District ....

Box Elder Trib. near Rangely, Colo — 1976 W.Yr.

Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Feb 9	0.10		1.0	E 550	0.15	Tons/day						
10	0.20			E 1020	.56							
11	0.20			E 1020	.56							
12	0.05			E 225	.03							
13	0.10			412	.11							
14	0.30			E 1380	1.1							
28	0.20			E 1020	.56							
			Feb.			3.07	Tons					
—												
Mar. 19	0.05			372	.05							
			Mar.			0.05	Tons					
		Total	Tonnage — 1976 W.Yr. = 3.12									

PRELIMINARY DATA SUBJECT TO REVISION

PRELIMINARY DATA SUBJECT TO REVISION

worked by MF 2-1-77

09306248

Sediment

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

Duck Creek @ Upper Sta. nr "84 Ranch" 1976 Water

1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Feb 12	0.50	44	1.0	44	0.06	Tons/day						
13	.30	87	1.0	87	.07							
14	.20	37	1.0	37	.02							
			Feb.			0.15 Tons						
Mar 1	.70	–		–	E 0.11							
18	1.5	–		–	E .50							
19	.14	–		–	E .03							
24	.04	–		–	E .02							
25	.01	–		–	E .01							
			Mar.			0.67 Tons						
May 20	.31	–		–	E .04							
			May			.04 Tons						
	Total Tonnage for 1976 =					0.86 Tons						

Comp. WRC 2/1/77
K.J.C.

P-280

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington ..... District .....

Sediment

09306250 Duck Cr. nr. 84 Ranch 1976 W.yr.

1976 Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Feb. 12	.05		1.0	E 100	0.01							
13	.03			E 100	.01							
14	.19			130	.07							
15	.65			E 200	.35							
16	.27		1.0	E 150	.11							
28	3.9		1.0	E 8000	84							
29	2.9		1.0	E 7000	55							
			Feb.			139.55						
Mar. 1	.76		1.0	E 5,000	10							
2	.07		1.0	E 1,500	.28							
18	2.1		1.0	E 4,000	23							
19	.51			E 4,000	5.5							
22	.04		1.0	E 600	.06							
23	.14			3500	1.3							
24	.28			4000	3.0							
25	.14		1.0	E 1500	.57							
			Mar.			43.71						
			Total tons for 1976 W.Yr. = 183.26									

This one needs a good review before publishing.

Sediment

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington .... District ....

1976 wyr.

09306246 Yellow Creek Tributary nr "84" Ranch, Colo.

1976 Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
Feb. 11	0.80		1.0	--	E 75	Tons/day						
12	2.4		{	15060	121							
13	1.7			5330	105							
14	1.7		1.0	5140	97							
26	2.0			--	E 110							
27	3.2			--	E 140							
28	1.8			--	E 110							
29	2.5			--	E 120							
			Feb.			878	Tons					
Mar. 1	2.5			--	E 120							
17	1.1			--	E 85							
18	2.5			--	E 120							
			Mar.			325						

PRELIMINARY DATA ... REVISION

Total Tonnage for 1976 = 1203 Tons.

Computed by [illegible]

PRELIMINARY DATA SUBJECT TO REVISION

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { 09306244
District

Sediment

Corral Gulch at "84" Ranch

1976 WY

Oct, 1975 Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		NOV Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
1					.03		1			1.0		.06
					.03							.06
					.03							.06
					.04							.06
5					.05		5					.06
					.04				125			.04
					.04				95			.04
					.05				115			.06
					.05				105			.06
10					.05		10		90			.05
					.04				95			.05
					.04				130			.06
					.05				180			.09
					.06				180			.09
15					.06		15		280			.11
					.06				270			.10
					.06				235			.11
					.06				195			.09
					.05				225			.13
20					.05		20					.04
					[illegible]							.04
					[illegible]							.05
					.07							[illegible]
					.06							.05
25		20	1.0		.01		25					[illegible]
					.04							[illegible]
					.04							[illegible]
					[illegible]							[illegible]
					.06							[illegible]
		15	1.0		[illegible]		30			1.0		[illegible]
31					.04							
					1.58							1.79

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. 09-306244
District

PRELIMINARY DATA SUBJECT TO REVISION

Carrol Gulch at "84" Ranch 197644

Date (Dec 1975)	MD Q	MD Conc	Coef	Adj MD-Conc	Load		Date (Jan 1976)	MD Q	MD Conc	Coef	Adj MD Conc	Load
1			1.0		.03		1					.01
					.03							.01
					.03							.01
					.03							.01
5					.02		5					.01
					.02							.01
					.02							.01
					.01							.01
					.01							.01
10					.01		10					.01
					.02							.01
					.01							.01
					.01							.01
					.01							.01
15					.01		15					.01
					.01							.01
					T							.01
					T							.01
					T							.01
20					.01		20					.01
					.01							.01
					.01							.01
					0							.01
		105			T							.01
25		100			0		25					T
		220			0							T
		255			0							T
		315			0							T
		420			0				55			T
					0							T
31			1.0		0		31					T
					0.32							0.31

9-230

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PRELIMINARY DATA SUBJECT TO REVISION

File No. { Washington 09 30 6244 / District

Cornell Creek "84" Ranch 1976 WY

Feb Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		March Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
1					T		1					.77
					T				20			.02
					T							.07
					T							.07
5					T		5					.07
					T							.09
					T							.11
					T							.16
					.02				25			.01
10					.09		10					.03
					.09				25			.01
					.07							.06
					.06							.04
					.05							.03
15					.07		15					.07
					.02							.04
					.07							.07
		125			.03							.43
					.04							.12
20					.15		20					.07
					.12							.09
					.06							.01
					.03				200			.05
					.07							.03
25					.07		25					.03
					.37							.02
					.54							.07
28					.54							.05
29					.62							.04
									50			.02
							31					.05
					3.15							2.55

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. Washington 093062/4 District

PRELIMINARY DATA SUBJECT TO REVISION

Pomme Creek near Ronan 1976-79

Apr Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		May Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
1					.11		1		145			.07
					.16				180			.10
					.11				210			.12
					.09				215			.12
5					.07		5		200			.12
					.05				230			.15
					.03				260			.19
					.03				415			.32
		110			.06				230			.15
10		110			.06		10		225			.18
		175			.10				205			.12
					.07				175			.10
					.07				135			.07
		310			.18				60			.03
15		155			.09		15		45			.03
		180			.10				80			.03
		230			.14				90			.04
		250			.16				65			.03
		235			.12				30			.01
20		215			.09		20		15			.01
		155			.07				15			.01
		185			.08				25			.01
		205			.09				65			.02
		190			.08				55			.03
25		150			.08		25		45			.02
		115			.07							.05
		95			.05							.06
		95			.05							.05
		110			.06							.05
30		155			.08							.06
							31					.0
					2.60							2.15

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. { Washington District 8L3062444

PRELIMINARY DATA SUBJECT TO REVISION

Canal Gulch at "84" Ranch 1976 April

June Date	MD Q	MD Conc	Coef	Adj MD-Conc	Load		July Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
1					.05		1					.01
					.06							.01
					.05							.01
					.04							T
5					.04		5					.01
					.03							T
					.03							.01
					.02							.01
					.02							.01
10					.03		10					.01
					.03							.01
					.03							.01
					.03				90			.01
					.03							.01
15					.03		15					.01
					.03							T
					.03							.01
					.03							.01
					.03							.02
20					.02		20					.02
					.02							.01
					.02				115			.01
					.02				152			T
					.02				135			T
25		110			[illegible]		25		108			T
					.03				80			T
					.03				67			.02
					.02				53			.01
					.02				60			.01
30		95			.02				42			.01
							31		45			.01
					0.90							0.27

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. Washington 09306244 District

PRELIMINARY DATA SUBJECT TO REVISION

Yorral Gulch at "84" Road 1976 WY

Aug Date	MD Q	MD Conc	Coef	Adj MD Conc	Load		Sept Date	MD Q	MD Conc	Coef	Adj MD Conc	Load
1		48			.01		1		50			T
		36			.01				53			T
		80			.01				50			T
		88			.01				43			T
5		57			T		5		40			T
		65			T				30			T
		78			T				30			T
		70			T				20			T
		75			T				15			T
10		93			T		10		25			T
		73			T				65			T
		81			T				42			T
		65			T				20			T
		85			T				35			T
15		104			T		15		22			T
		88			T				20			T
		87			T				12			T
		140			T				24			T
		105			T				30			T
20		38			T		20		26			T
		34			T				23			T
		30			T				90			T
		58			T				68			T
		35			T				20			T
25		25			T		25		15			T
		34			T				15			T
		50			T				20			T
		50			T				55			T
		50			T				40			T
		93			T		30		38			T
31		53			T							
					>0.04							>0.01

Total Tons for 1976 WY = 16.1

Computed by KJG

9

SHIPPED JAN 2 4 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MEEKER, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

Compiled ACO 1/31/77

09306244 Stream and location: Corral Gulch at "84" Ranch

Listed Computed by: L.J.C.

Checked by: PH 2-8-77

Date		10-13-76	10-13-76	10-14-76	10-15-76	10-16-76	10-17-76	10-18-76	10-19-76	10-20-76	10-21-76
Time		1030	1200	1100	1200	1200	1200	1200	1200	1200	1207
Gage height											
Sampling Sta.		MS 1	2	3	4	5	6	7	8	9	MS 10/ETR
Temp. & Spec. Cond.		/1800	/1800	/1700	/1700	/1700	/1700	/1600	/1600	— / —	/1500
Remarks										Empty	
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net	381	253	329	378	368	305	366	363		356
Container no.		128	129	130	131	132	133	134	135		1[illegible]
WEIGHT OF SEDIMENT	Gross	36.7217	37.9165	37.4504	37.5215	37.6972	37.4194	37.5647	36.6964		37.7760
	Tare	36.7156	37.9044	37.4403	37.5120	37.6922	37.4119	37.5571	36.6364		37.7702
	Net	.0061	.0121	.0101	.0095	.0050	.0075	.0076	.0100		.0058
	D.S. corr.										
	Net										
Conc. (ppm)		16	48	31	25	14	19	21	28		16

Date		10-21-76	10-22-76	10-23-76	10-24-76	10-25-76	10-26-76	10-27-76	10-28-76	10-29-76	10-30-76
Time		1208	1200	1200	1200	1200	1200	1200	1200	1200	1200
Gage height											
Sampling Sta.		MS 11 / ETR	12	13	14	15	16	17	18	19	20
Temp. & Spec. Cond.		/1500	/1700	/1700	/1700	/1700	/1700	/1600	/1600	/1600	/1600
Remarks											
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net	432	313	355	367	352	365	359	367	345	317
Container no.		137	138	139	140	141	142	143	144	145	[illegible]
WEIGHT OF SEDIMENT	Gross	37.7769	37.8781	37.7082	37.1083	37.0448	37.5480	37.3737	36.5451	37.7[illegible]	37.5541
	Tare	37.7694	37.8713	37.6972	37.1003	37.0339	37.5396	37.3723	36.5378	37.7703	37.5441
	Net	.0055	.0068	.0110	.0080	.0109	.0086	.0064	.0072	.0055	.0102
	D.S. corr.										
	Net										
Conc. (ppm)		13	[illegible]	31	[illegible]	31	[illegible]	18	[illegible]		

10

SHIPPED JAN 2 4 1977

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MEEKER, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

Computed by HCD 1/31/77

09306244 Stream and location CORRAL GULCH AT "84" RANCH

Computed by LJTO Checked by PH 2-8-77

Date		10-31-76	11-01-76	11-02-76	11-03-76	11-04-76	11-04-76	11-05-76	11-07-76	11-07-76	11-08-76
Time		1700	1700	1700	1700	1702	1704	[illegible]	[illegible]	1700	[illegible]
Gage height											
Sampling Sta.		21	22	23	24	MS 25/EDI	MS 26/EDI	27	28	29	30
Temp. & Spec. Cond.		1600	1600	1600	1500	1600	1600	/	DW/1500	DW/1600	DW/1550
Remarks								NOT enough water			
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net	377	377	391	391	388	391	43	346	312	[illegible]
Container no.		147	148	149	150	151	152	153	154	155	156
WEIGHT OF SEDIMENT	Gross	37.3718	37.6755	37.6330	37.6450	37.5676	37.6565	36.7605	36.8093	36.5301	36.3540
	Tare	37.3618	37.6585	37.6208	37.6353	37.5570	37.6473	36.7549	36.8124	36.5109	36.3414
	Net	.0100	.0170	.0122	.0097	.0106	.0092	.0056	.0169	.0212	.0126
	D.S. corr.										
	Net										
Conc. (ppm)		26	45	31	25	27	24	130	49	68	38

Date		11-09-76	11-10-76	11-11-76	11-12-76	11-13-76	11-13-76	11-13-76	11-14-76		
Time		1700	1700	1700	1700	1700	[illegible]	1700	1700		
Gage height											
Sampling Sta.		31	32	33	34	35	MS 36	MS 37	38		
Temp. & Spec. Cond.		DW/1300	DW/1200	DW/1500	DW/1600	DW/1600	1650	1650	1700	/	/
Remarks											
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net	358	334	342	328	363	375	328	299		
Container no.		157	158	159	160	161	162	163	164		
WEIGHT OF SEDIMENT	Gross	36.6113	36.7200	36.3180	36.4502	36.7761	36.4268	36.7061	37.1533		
	Tare	36.6035	36.7082	36.2934	36.4241	36.7424	36.3637	36.7221	37.0540		
	Net	.0078	.0118	.0246	.0281	.0337	.0631	.0518	.0993		
	D.S. corr.										
	Net										
Conc. (ppm)		22	35	72	82	93	162	141	[illegible]		

SHIPPED OCT 1 4 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MEEKER, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

09306244 Stream and location Corral Gulch @ "84" Ranch Rmt Computed by Checked by ACD 1/7/77

Date		10/6/76				10/6/76					
Time		1125				1135					
Gage height											
Sampling Sta.		Hand dip 2	3/3			Hand dip 2	3/3				
Temp. & Spec. Cond.		10.5/1400	/	/	/	10.5/1400	/	/	/	/	/
Remarks		Q = .02 C.F.S.				Q = .02 C.F.S.					
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net	375	378			378	359				
Container no.		205				206					
WEIGHT OF SEDIMENT	Gross	36.6158	753			36.4716	739				
	Tare	36.6108				36.4679					
	Net	.0050				.0037					
	D.S. corr.										
	Net										
Conc. (ppm)		3				5					

Date											
Time											
Gage height											
Sampling Sta.											
Temp. & Spec. Cond.		/	/	/	/	/	/	/	/	/	/
Remarks											
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net										
Container no.											
WEIGHT OF SEDIMENT	Gross										
	Tare										
	Net										
	D.S. corr.										
	Net										
Conc. (ppm)											

SHIPPED OCT 1 4 1976

UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey—Water Resources Division

MEEKER, CO.

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

Stream and location 09306244 Coal Creek @ Sta Rock Hwy

Computed by [illegible] Checked by ACD 1/7/77

Date		10-13-76									
Time		1030									
Gage height											
Sampling Sta.		Dip 1/2	2/2								
Temp. & Spec. Cond.		2.5 / 1850	/	/	/	/	/	/	/	/	/
Remarks											
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net	381	395								
Container no.		207									
WEIGHT OF SEDIMENT	Gross	36.1082									
	Tare	36.6959	776								
	Net	.0123									
	D.S. corr.										
	Net										
Conc. (ppm)		16									

Date											
Time											
Gage height											
Sampling Sta.											
Temp. & Spec. Cond.		/	/	/	/	/	/	/	/	/	/
Remarks											
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net										
Container no.											
WEIGHT OF SEDIMENT	Gross										
	Tare										
	Net										
	D.S. corr.										
	Net										
Conc (ppm)											

SHIPPED OCT 30 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MEEKER, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

Stream and location 09306244 Corral Gulch at 84 Rangely KW

Computed by ACD 1/4/79 Checked by PH 1-7-77

Date		10-21-76			10-21-76						
Time		1205			1210						
Gage height		—			—						
Sampling Sta.		Dip 1/2	3/2		Dip 1/2	3/2					
Temp. & Spec. Cond.		10 / 1850	/	/	10 / 1850	/	/	/	/	/	/
Remarks											
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net	411	344		423	373					
Container no.		102			103						
WEIGHT OF SEDIMENT	Gross	37.7456			36.7014						
	Tare	37.7341	755		36.6905	794					
	Net	.0115			.0141						
	D.S. corr.										
	Net										
Conc. (ppm)		15			18						

Date											
Time											
Gage height											
Sampling Sta.											
Temp. & Spec. Cond.		/	/	/	/	/	/	/	/	/	/
Remarks											
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net										
Container no.											
WEIGHT OF SEDIMENT	Gross										
	Tare										
	Net										
	D.S. corr.										
	Net										
Conc. (ppm)											

11

SHIPPED DEC 2 0 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MILLER, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

Stream and location 09306244 Corral Gulch at "84" Ranch RMH Computed by [illegible] Checked by [illegible] 1/18/77

Date		11/4/76									
Time		1700			1750						
Gage height											
Sampling Sta.		EtR 1/1	2/2		EtR 1/1	2/2					
Temp. & Spec. Cond.		90 /	/	/	90 /	/	/	/	/	/	/
Remarks		Q=.03 CFS			Q=.03 CFS						
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net	358	390		401	399					
Container no.		166			167						
WEIGHT OF SEDIMENT	Gross	36.7514			37.0717						
	Tare	36.7440	718		37.0580	781					
	Net	.0074			.0137						
	D.S. corr.										
	Net										
Conc. (ppm)		10			17						

Date											
Time											
Gage height											
Sampling Sta.											
Temp. & Spec. Cond.		/	/	/	/	/	/	/	/	/	/
Remarks											
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net										
Container no.											
WEIGHT OF SEDIMENT	Gross										
	Tare										
	Net										
	D.S. corr.										
	Net										
Conc. (ppm)											

14

SHIPPED DEC 2 0 1976

UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey—Water Resources Division

MEEKER,

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

Stream and location 09306244 Corral Gulch NR. "84" Ranch RMH Computed by PH 1-14-77 Checked by [illegible] 1/14/77

Date		11/23/76				11/23/76					
Time		1545				1550					
Gage height		1.15				1.15					
Sampling Sta.		EIR 1/1	2/2			EIR 1/1	2/2				
Temp. & Spec. Cond.		7.5°/1780	/	/	/	7.5°/1780	/	/	/	/	/
Remarks		"									
WEIGHT OF SAMPLE	Gross	"									
	Tare	"									
	Net	372	415			373	412				
Container no.		172				173					
WEIGHT OF SEDIMENT	Gross	37.2995	787.			36.8555	785				
	Tare	37.2954				36.8547					
	Net	.0041				.0013					
	D.S. corr.	–									
	Net										
Conc. (ppm)		5.				10.					

Date		–									
Time		–									
Gage height		–									
Sampling Sta.		–									
Temp. & Spec. Cond.		– /	/	/	/	/	/	/	/	/	/
Remarks		–									
WEIGHT OF SAMPLE	Gross	–									
	Tare	–									
	Net	–									
Container no.		–									
WEIGHT OF SEDIMENT	Gross	–									
	Tare	–									
	Net	–									
	D.S. corr.	–									
	Net										

Conc. (ppm)

SHIPPED DEC 2 0 1976

UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey—Water Resources Division

MEEKER, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

Stream and location 09306244 Corral Gulch near Elk Springs Ute

Computed by PH 1-12-76 Checked by [illegible] 1/12/77

Date		12-16-76			12-16-76						
Time		1610			1615						
Gage height		1.12			1.12						
Sampling Sta.		DIP 1/2	2/2		DIP 1/2	2/2					
Temp & Spec Cond.		5.5 / 1790	/	/	5.5 / 1790	/	/	/	/	/	/
Remarks											
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net	351	370		366	369					
Container no.		211			213						
WEIGHT OF SEDIMENT	Gross	36.0065	731		37.0760	735					
	Tare	35.9937			37.0678						
	Net	.0128			.0082						
	D.S. corr.										
	Net										
Conc. (ppm)		18			11						

Date											
Time											
Gage height											
Sampling Sta.											
Temp & Spec Cond.		/	/	/	/	/	/	/	/	/	/
Remarks											
WEIGHT OF SAMPLE	Gross										
	Tare										
	Net										
Container no.											
WEIGHT OF SEDIMENT	Gross										
	Tare										
	Net										
	D.S. corr.										
	Net										
Conc. (ppm)											

SHIPPED JAN 2 4 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MEEKER, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form) Compiled ACO 1/31/77

09306244 Stream and location: Current Creek at "84" Ranch

Listed Computed by: [illegible] Checked by: PH 2-8-77

Date		10-13-76	10-13-76	10-14-76	10-15-76	10-16-76	10-17-76	10-18-76	10-19-76	10-20-76	10-21-76
Time		1030	1200	1200	1200	1200	1200	1200	1200	1200	1207
Gage height											
Sampling Sta.		MS 1	2	3	4	5	6	7	8	9	MS 10/ETR
Temp. & Spec. Cond.		1800	1800	1700	1700	1700	1700	1600	1600	—	1500
Remarks										Empty	
SAMPLE	Gross										
	Tare										
	Net	381	253	329	378	368	305	366	363		356
Container no.		128	129	130	131	132	133	134	135		136
SEDIMENT	Gross	36.7217	37.9165	37.4504	37.5215	37.6970	37.4194	37.5647	36.6964		37.7760
	Tare	36.7156	37.9044	37.4403	37.5120	37.6922	37.4119	37.5571	36.6364		37.7702
	Net	.0061	.0121	.0101	.0095	.0050	.0075	.0076	.0100		.0058
	D.S. corr.										
	Net										
Conc. (ppm)		16	48	31	25	14	19	21	28		16

Date		10-21-76	10-22-76	10-23-76	10-24-76	10-25-76	10-26-76	10-27-76	10-28-76	10-29-76	10-30-76
Time		1208	1200	1200	1200	1200	1200	1200	1200	1200	1200
Gage height											
Sampling Sta.		MS 11 / ETR	12	13	14	15	16	17	18	19	20
Temp. & Spec. Cond.		1500	1700	1700	1700	1700	1700	1600	1600	1600	1600
Remarks											
SAMPLE	Gross										
	Tare										
	Net	432	313	355	367	355	365	359	367	345	317
Container no.		137	138	139	140	141	142	143	144	145	146
SEDIMENT	Gross	37.7769	37.8781	37.7082	37.1083	37.0448	37.5480	37.3787	36.5451	37.77[illegible]	37.5544
	Tare	37.7694	37.8713	37.6972	37.1003	37.0339	37.5896	37.3723	36.5378	37.7723	37.5442
	Net	.0055	.0068	.0110	.0080	.0109	.0086	.0064	.0073	.0055	.0102
	D.S. corr.										
	Net										
Conc. (ppm)		13	22	31	22	31	24	18	20	16	32

SHIPPED JAN 2 4 1978

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MEEKER, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form) Computed by HCD 1/31/77

09306244 Stream and location CORRAL GULCH AT "84" RANCH

Computed by [illegible] Checked by PH 2-8-77

Date		10-31-76	11-01-76	11-02-76	11-03-76	11-04-76	11-05-76	11-06-76	11-07-76	11-08-76	11-09-76
Time		1700	1700	1700	1700	1700	1714	[illegible]	1700	1700	1700
Gage height											
Sampling Sta.		21	22	23	24	MS 25/EW	MS 26/EW	27	28	29	30
Temp. & Spec. Cond.		1600	1600	1600	1500	1600	1600	/	DW/1500	DW/1600	DW/1550
Remarks								INDT enough water			
SAMPLE	Gross										
	Tare										
	Net	377	377	391	391	388	391	43	346	312	[illegible]
Container no.		147	148	149	150	151	152	153	154	155	[illegible]
SEDIMENT	Gross	37.3718	37.6755	37.6330	37.6450	37.5676	37.6565	36.7605	36.8093	36.5301	36.3500
	Tare	37.3618	37.6585	37.6208	37.6353	37.5570	37.6473	36.7549	36.8124	36.5109	36.3414
	Net	.0100	.0170	.0122	.0097	.0106	.0092	.0056	.0169	.0212	.0126
	D.S. corr.										
	Net	.									
Conc. (ppm)		26	45	31	25	27	24	130	49	68	38

Date		11-09-76	11-10-76	11-11-76	11-12-76	11-13-76	11-14-76	11-15-76	11-16-76		
Time		1700	1700	1700	1700	1700	[illegible]	[illegible]	1700		
Gage height											
Sampling Sta.		31	32	33	34	35	MS 36	MS 37	38		
Temp. & Spec. Cond.		DW/1300	DW/1200	DW/1500	DW/1600	DW/1600	/1650	/1550	/1700	/	/
Remarks											
SAMPLE	Gross										
	Tare										
	Net	358	334	342	328	363	375	338	299		
Container no.		157	158	159	160	161	162	163	164		
SEDIMENT	Gross	36.6113	36.7000	36.3180	36.4502	36.7761	36.4268	36.7091	37.1533		
	Tare	36.6035	36.7082	36.2934	36.4241	36.7424	36.3537	36.7721	37.0540		
	Net	.0078	.0118	.0246	.0281	.0337	.0631	.0518	.0993		
	D.S. corr.										
	Net										
Conc (ppm)		22	35	72	83	93	168	141	332		

SHIPPED OCT 1 4 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MEEKER, CO

SEDIMENT CONCENTRATION, NOTES, DEPTH INTEGRATED SAMPLES (Short form)

306244 Stream and location Corral Gulch @ "84" Ranch Both Computed by [illegible] Checked by ACD 1/7/77

Date	10/6/76				10/6/76					
Time	1125				1135					
Gage height	—				—					
Sampling Sta.	Hold [illegible]	3/2		Hold [illegible]	[illegible]	[illegible]				
Temp & Spec. Cond.	10.5/1440	/	/	/	[illegible]	/	/	/	/	/
Remarks	Q = .02 C.F.S.				[illegible]					
SAMPLE Gross										
SAMPLE Tare										
SAMPLE Net	375	378			378	359				
Container no.	205				206					
SEDIMENT Gross	36.6158	753			36.4716	730				
SEDIMENT Tare	36.6108				36.4679					
SEDIMENT Net	.0054				.0037					
SEDIMENT D.S. corr.										
SEDIMENT Net										
Conc. (ppm)	3				5					

Date										
Time										
Gage height										
Sampling Sta.										
Temp & Spec. Cond.	/	/	/	/	/	/	/	/	/	/
Remarks										
SAMPLE Gross										
SAMPLE Tare										
SAMPLE Net										
Container no.										
SEDIMENT Gross										
SEDIMENT Tare										
SEDIMENT Net										
SEDIMENT D.S. corr.										
SEDIMENT Net										
Conc. (ppm)										

SHIPPED OCT 1 4 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MEEKER, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

Stream and location 09306244 [illegible] Computed by [illegible] Checked by ACO 1/7/77

Date		10-13-76									
Time		1030									
Gage height											
Sampling Sta.		Dip 1/2	2/3								
Temp. & Spec. Cond.		25 / 1850	/	/	/	/	/	/	/	/	/
Remarks											
Of sample	Gross										
	Tare										
	Net	381	395								
Container no.		207									
Of sediment	Gross	36.1087									
	Tare	36.6959	776								
	Net	.0128									
	D.S. corr.										
	Net										
Conc. (ppm)		16									

Date											
Time											
Gage height											
Sampling Sta.											
Temp. & Spec. Cond.		/	/	/	/	/	/	/	/	/	/
Remarks											
Of sample	Gross										
	Tare										
	Net										
Container no.											
Of sediment	Gross										
	Tare										
	Net										
	D.S. corr.										
	Net										
Conc (ppm)											

SHIPPED OCT 30 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

MEEKER, CO

09306244 Stream and location Corral Gulch at 84 Rifle. Kjo

Computed by ACD 1/4/79 Checked by PH 1-7-77

Date	10-21-76			10-21-76						
Time	1205			1210						
Gage height	—			—						
Sampling Sta.	DIP 1/2	2/2		DIP 1/2	2/2					
Temp & Spec. Cond.	10 / 1850	/	/	10 / 1850	/	/	/	/	/	/
Remarks										
SAMPLE Gross										
SAMPLE Tare										
SAMPLE Net	411	341		403	373					
Container no.	102			103						
SEDIMENT Gross	37.7456			36.7016						
SEDIMENT Tare	37.7341	455		36.6875	79%					
SEDIMENT Net	.0115			.0141						
SEDIMENT D.S. corr.										
SEDIMENT Net										
Conc. (ppm)	15			18						

Date										
Time										
Gage height										
Sampling Sta.										
Temp & Spec. Cond.	/	/	/	/	/	/	/	/	/	/
Remarks										
SAMPLE Gross										
SAMPLE Tare										
SAMPLE Net										
Container no.										
SEDIMENT Gross										
SEDIMENT Tare										
SEDIMENT Net										
SEDIMENT D.S. corr.										
SEDIMENT Net										
Conc. (ppm)										

SHIPPED DEC 2 0 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

LAKEWOOD, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

9306244 Stream and location Corral Gulch at "34" Ranch RMH Computed by [illegible] Checked by [illegible] 1/18/77

Date		11/4/76			11/4/76						
Time		1700			1750						
Gage height											
Sampling Sta.		ETR 1/4	1/2		ETR 1/4	1/2					
Temp. & Spec. Cond.		90 /	/	/	92 /	/	/	/	/	/	/
Remarks		Q=.03CFS			Q=.03CFS						
OF SAMPLE	Gross										
	Tare										
	Net	358	390		401	399					
Container no.		166			167						
OF SEDIMENT	Gross	36.7514			37.0717						
	Tare	36.7440	748		37.0580	781					
	Net	.0074			.0137						
	D.S. corr.										
	Net										
Conc. (ppm)		10			17						

Date											
Time											
Gage height											
Sampling Sta.											
Temp. & Spec. Cond.		/	/	/	/	/	/	/	/	/	/
Remarks											
OF SAMPLE	Gross										
	Tare										
	Net										
Container no.											
OF SEDIMENT	Gross										
	Tare										
	Net										
	D.S. corr.										
	Net										
Conc (ppm)											

SHIPPED DEC 2 0 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MEEKER, C

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

Stream and location 1306244 Corral Gulch NR. "84" Ranch RMH Computed by PH 1-1477 Checked by [illegible] 11/4/77

Date		11/23/76				11/23/76					
Time		15:45				15:50					
Gage height		1.15				1.15					
Sampling Sta.		EIR 1/1	2/2			EIR 1/1	2/2				
Temp. & Spec. Cond.		7.5°/750	/	/	/	7.5°/750	/	/	/	/	/
Remarks		-									
SAMPLE	Gross	-									
	Tare										
	Net	372	415			373	412				
Container no.		172				173					
SEDIMENT	Gross	37.2995	787.			36.8555	785				
	Tare	37.2954				36.8547					
	Net	.0041				.0013					
	D.S. corr.	-									
	Net										
Conc. (ppm)		5.				10.					

		-									
		-									
Date		-									
Time		-									
Gage height		-									
Sampling Sta.		-									
Temp. & Spec. Cond.		-/	/	/	/	/	/	/	/	/	/
Remarks		-									
SAMPLE	Gross	-									
	Tare	-									
	Net	-									
Container no.		-									
SEDIMENT	Gross	-									
	Tare	-									
	Net	-									
	D.S. corr.	-									
	Net										
Conc. (ppm)											

SHIPPED DEC 2 0 1976

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey—Water Resources Division

MEEKER, CO

SEDIMENT CONCENTRATION NOTES, DEPTH INTEGRATED SAMPLES (Short form)

Stream and location 09306244 Corral Gulch near Ell Ranch KSe

Computed by PH 1-12-76 Checked by [illegible] 1/11/11

Date	12-16-76			12-16-76						
Time	1610			1615						
Gage height	1.12			1.12						
Sampling Sta.	DIP 1/2	2/2		DIP 1/2	2/2					
Temp & Spec Cond	5.5 / 1790	/	/	5.5 / 1790	/	/	/	/	/	/
Remarks										
Sample Gross										
Sample Tare										
Sample Net	351	370		366	369					
Container no.	211			213						
Sediment Gross	36.0065	731		37.0760	735					
Sediment Tare	35.9937			37.0678						
Sediment Net	.0128			.0082						
Sediment D.S. corr.										
Sediment Net										
Conc. (ppm)	18			11						

Date										
Time										
Gage height										
Sampling Sta.										
Temp & Spec Cond.	/	/	/	/	/	/	/	/	/	/
Remarks										
Sample Gross										
Sample Tare										
Sample Net										
Container no.										
Sediment Gross										
Sediment Tare										
Sediment Net										
Sediment D.S. corr.										
Sediment Net										
Conc.										

GPO : 1974 O - 536-064

ALLUVIAL AQUIFERS

SECTION 1.2.3

WET CHEMICAL AND SPECTROGRAPHIC ANALYSES, ALLUVIAL TEST HOLES

EXPLANATION -- WATER QUALITY COMPUTER OUTPUT SHEETS

1. Code Hole Description Data

Job # 741-40

Assigned project number for Rio Blanco Oil Shale Project by Wright Water Engineers, Inc

X = Distance in feet, north of baseline 7200 feet Datum of the Colorado State Coordinate System

Y = Distance, in feet, east of the baseline 7200 foot Datum of the Colorado State Coordinate System

Z = Elevation in feet above sea of the core hole at ground surface

Date Drill Compl.

The date when drilling was completed on the Core Hole.

Conv. to Monitor

Date the Core Hole was converted to a Monitor Hole.

Aquifer 1:

Depth in feet to the top and bottom of the upper aquifer from G.L.

Aquifer 2:

Depth in feet to the top and bottom of the lower aquifer from G.C.

2. Sample Description Data

Date

Date water sample was collected.

Depth

Depth for Method 1: depth sample was collected during drilling.

Depth for Method 2: depth sample was collected during pumping test.

Depth for Method 3: the static water level of the hole when sampled.

Temp.

Field temperature of sample (^{o}F)

Lab Num.

Designation number assigned by the analyzing laboratory.

Method

0. Drilling soap sample
1. Drilling program sample
2. Pumping test program sample
3. Monitoring program sample
3A. Monitoring program sample, not representative of aquifer conditions

Aquif. Loc.

U Sample from upper aquifer during drilling, pumping or monitoring
L Sample from lower aquifer during pumping test or monitoring
C Sample combination of upper and lower aquifer during drilling
A Sample from alluvial aquifer

3. Wet -- Wet Chemical Analysis

Values are in milligrams per liter, except for:

Gross Alpha-- picocuries per liter
Gross Beta -- picocuries per liter
pH -- standard pH values
Conductance-- micromhos per centimeter
Negative values indicate less than minimum detectable limit indicated
0.0 value - constituent not tested for
**** - not analyzed for using wet chemical analysis

4. Spectrographic - spectrographic analysis of 67 elements

All values are in milligrams per liter
0.0 means less than minimum detectable amount
99999.000 means major amount
***** is used in Water Quality Analysis Summary to indicate an element has not been analyzed above the minimum detectable limit

JOB#-741-40F OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 149963.09 Y- 223340.39 Z- 6986.42
DATE DRILL COMPL-120475 DATE CONV TO MONITOR- 0 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
DATE	33175	41575	42975	51475	52975	61175	63075	71575	80575	82775	101075	112075
DEPTH	0.0	20.70	21.04	21.74	21.85	22.10	22.36	24.88	25.46	24.28	24.80	23.70
TEMP	47.3	47.1	49.1	47.8	49.3	49.6	52.3	50.0	50.0	54.1	51.8	48.2
LAB ID												
LAB NUM	9023	184	185	436	437	898	2260	1542	2048	2764	3442	4656
METHOD	3	3	3	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A	A
WET												
ALUMINUM	-0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AMMONIA	0.0	0.400	-0.100	0.200	0.200	0.400	0.0	0.300	-0.100	0.500	-0.100	0.800
ARSENIC	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.010	-0.010	-0.010	-0.010	-0.010
BICARBONAT	480.000	490.000	455.000	460.000	410.000	430.000	435.000	445.000	470.000	470.000	450.000	470.000
CADMIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.030
CALCIUM	77.000	90.000	84.000	80.000	120.000	98.000	130.000	98.000	90.000	44.000	140.000	140.000
CARBONATE	-0.100	-0.100	-0.100	-0.100	24.000	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100
CHLORIDE	12.000	14.000	9.600	17.000	7.000	14.000	6.800	6.900	8.200	12.000	14.000	6.700
CHROMIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
COPPER	-0.010	0.100	-0.100	-0.100	-0.100	0.100	-0.100	-0.100	0.100	-0.100	0.100	0.300
FLUORIDE	0.200	0.400	0.400	0.400	0.400	0.400	0.200	0.400	0.600	0.400	0.700	0.400
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	-0.050	4.900	0.300	9.100	15.000	8.300	0.300	12.000	9.500	8.100	0.600	7.900
LEAD	0.020	0.100	0.070	0.500	0.200	0.100	0.100	0.040	0.090	0.500	0.040	0.200
MAGNESIUM	45.000	47.000	35.000	56.000	7.300	52.000	29.000	57.000	59.000	85.000	37.000	26.000
MERCURY	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.002	-0.002	-0.002	-0.002	-0.002	-0.001
NITRATE	3.900	4.800	5.200	4.700	0.200	4.500	3.900	3.900	4.900	3.500	3.100	2.500
PHOSPHATE	-0.100	-0.100	-0.100	-0.100	-0.010	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100
POTASSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	-0.010	-0.010	-0.010	-0.100	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
SIL DIOXID	27.000	23.000	22.000	26.000	28.000	26.000	27.000	30.000	29.000	29.000	31.000	29.000
SODIUM	160.000	145.000	155.000	75.000	190.000	100.000	115.000	90.000	145.000	130.000	110.000	130.000
SULFATE	260.000	275.000	270.000	150.000	300.000	250.000	280.000	250.000	330.000	285.000	280.000	280.000
SULFIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.010	0.200	-0.100	0.200	0.300	0.300	0.300	0.600	0.200	0.600	0.200	0.600
GROS ALPHA	0.0	6.300	7.400	5.600	5.000	6.000	4.800	4.100	6.000	5.100	5.500	15.000
GROSS BETA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.000	0.0	0.0
HARDNESS	375.000	420.000	355.000	430.000	330.000	460.000	450.000	480.000	470.000	460.000	500.000	450.000
PH	6.400	6.400	6.400	5.800	6.100	6.000	6.800	6.800	6.300	6.800	6.300	6.200
CONDUCTANC	990.000	1120.000	1050.000	1120.000	1065.000	1140.000	1440.000	1104.000	1056.000	1150.000	960.000	1110.000
DIS SOLIDS	840.000	840.000	810.000	640.000	890.000	760.000	800.000	765.000	905.000	820.000	840.000	840.000
MANGANESE	-0.050	-0.050	1.900	0.100	0.400	0.500	0.100	0.200	1.000	0.800	0.200	4.000
ALKALINITY	395.000	400.000	375.000	395.100	360.000	350.000	355.000	365.000	385.000	385.000	370.000	385.000
CYANIDE	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
BORON	1.100	2.900	1.900	-0.010	-0.010	0.100	0.070	-0.010	0.020	9.600	-0.010	-0.100
BARIUM	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
SILVER	-0.010	-0.010	-0.010	-0.010	-0.010	0.010	-0.100	-0.010	-0.010	-0.010	-0.010	-0.010
NICKEL	0.030	0.040	0.020	0.020	0.040	0.060	0.010	0.030	0.030	0.050	0.010	0.100
LITHIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DOC	0.0	19.000	9.000	14.000	15.000	35.000	8.000	28.000	28.000	18.000	30.000	63.000
NITRITE-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BROMIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
C.O.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHENOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KJELDAHL N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC												
ALUMINUM	0.100	0.500	0.100	0.050	0.100	0.050	0.100	0.100	0.100	0.100	0.010	0.100
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.0	0.0	0.0	0.0	0.001	0.001	0.001	0.001	0.010	0.0	0.0	0.001
BERYLLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.200	0.500	0.200	0.500	0.200	0.500	0.200	0.500	0.500	0.500	0.200	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	10.000	10.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COBALT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.001	0.010	0.001	0.001	0.010	0.010	0.010	0.020	0.001	0.001	0.010	0.010
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.020	0.050	0.050	0.010	0.100	0.050	0.050	0.020	0.050	0.010	0.050	0.050
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.001	0.0
LITHIUM	0.010	0.001	0.001	0.0	0.001	0.001	0.0	0.010	0.010	0.0	0.001	0.001
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	5.000	5.000	99999.000
MANGANESE	0.010	0.005	0.010	0.001	0.010	0.001	0.001	0.050	0.001	0.001	0.001	0.020
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.050	0.0	0.005	0.001	0.010	0.002	0.0	0.001	0.0	0.0	0.001	0.001
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	0.100	1.000	2.000	0.100	1.000	0.100	1.000	1.000	1.000	1.000	1.000	0.500
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.100	0.100	0.0	0.0	0.100	0.300	0.0	0.100	0.300	0.0	0.200	0.200
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	20.000	5.000	5.000	2.000	5.000	2.000	2.000	10.000	2.000	5.000	5.000	2.000
SILVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0	0.0
SODIUM	99999.000	5.000	10.000	2.000	10.000	5.000	10.000	99999.000	99999.000	99999.000	99999.000	2.000
STRONTIUM	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.010	0.100	0.100
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.001	0.0	0.001	0.010	0.010	0.005	0.001	0.020	0.001	0.005	0.0	0.001
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.001	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.001	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB#-741-40F OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 149963.09 Y- 223340.39 Z- 6986.42
DATE DRILL COMPL-120475 DATE CONV TO MONITOR- 0 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	13	14	15	16	17	18	19	20	21	22	23
DATE	121275	12876	21776	41376	52176	62176	73176	82976	92476	111476	20177
DEPTH	22.23	20.29	18.73	15.15	21.31	22.17	24.38	34.57	27.38	22.64	23.90
TEMP	48.5	46.0	44.6	43.0	47.3	44.0	52.0	49.8	46.0	48.5	42.0
LAB ID											
LAB NUM	5235	6299	6758	8368	9524	641	1502	2138	3539	4124	5898
METHOD	3	3	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A
WET											
ALUMINUM	0.0	0.0	0.0	-0.100	0.0	0.0	0.0	0.0	0.0	-0.100	0.200
AMMONIA	-0.100	-0.100	1.400	0.280	0.200	0.0	0.0	0.200	0.0	0.0	0.0
ARSENIC	-0.010	-0.100	-0.100	-0.010	-0.010	0.0	0.0	0.0	0.0	-0.010	0.0
BICARBONAT	470.000	445.000	450.000	360.000	425.000	415.000	410.000	415.000	440.000	490.000	510.000
CADMIUM	0.400	0.010	0.020	0.020	-0.010	0.0	0.0	0.0	0.0	-0.010	-0.010
CALCIUM	88.000	67.000	80.000	120.000	120.000	87.000	90.000	81.000	83.000	110.000	105.000
CARBONATE	-0.100	-0.100	-0.100	21.000	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100
CHLORIDE	9.800	5.400	1.300	7.000	20.000	9.900	9.900	5.700	9.600	8.200	9.300
CHROMIUM	-0.010	-0.010	-0.010	0.100	-0.010	0.0	0.0	0.0	0.0	-0.010	-0.010
COPPER	0.500	0.300	0.300	0.300	-0.100	0.0	0.0	0.0	0.0	-0.100	-0.100
FLUORIDE	0.400	0.200	0.300	0.400	0.400	0.200	0.300	0.200	0.400	0.200	0.200
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	9.000	7.500	15.000	0.200	-0.050	-0.050	-0.050	-0.050	-0.050	-0.050	-0.050
LEAD	0.100	0.200	0.080	0.300	0.020	0.0	0.0	0.0	0.0	0.020	0.020
MAGNESIUM	60.000	67.000	39.000	41.000	39.000	51.000	57.000	66.000	56.000	31.000	41.000
MERCURY	-0.001	-0.001	-0.001	-0.001	-0.001	0.0	0.0	0.0	0.0	0.001	-0.001
NITRATE	3.100	3.200	4.400	1.100	3.900	12.000	3.300	2.500	0.0	0.0	3.000
PHOSPHATE	-0.100	-0.100	0.100	-0.100	-0.100	0.100	-0.100	0.200	0.200	0.100	-0.100
POTASSIUM	0.0	0.0	0.0	3.500	-1.000	8.000	2.000	4.000	5.000	3.000	2.000
SELENIUM	-0.010	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	0.0	-0.010	-0.010
SIL DIOXID	26.000	29.000	27.000	25.000	25.000	28.000	29.000	17.000	30.000	28.000	29.000
SODIUM	125.000	140.000	180.000	90.000	110.000	145.000	125.000	94.000	130.000	150.000	160.000
SULFATE	260.000	315.000	295.000	285.000	285.000	300.000	335.000	350.000	310.000	325.000	300.000
SULFIDE	0.0	0.0	0.0	-0.100	-0.100	0.0	0.0	0.0	0.0	-0.100	1.600
ZINC	0.500	0.700	0.300	0.800	-0.100	0.0	0.0	0.0	0.0	-0.100	-0.100
GROS ALPHA	10.000	24.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.500	5.200
GROSS BETA	11.000	18.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.000
HARDNESS	470.000	440.000	360.000	0.0	455.000	430.000	460.000	0.0	440.000	405.000	430.000
PH	6.100	6.400	6.400	6.300	6.000	6.100	6.600	0.0	6.400	6.300	0.0
CONDUCTANC	1085.000	1177.000	1100.000	1040.000	1160.000	1070.000	1180.000	1130.000	1100.000	1800.000	1200.000
DIS SOLIDS	810.000	730.000	910.000	700.000	820.000	945.000	740.000	800.000	780.000	775.000	860.000
MANGANESE	3.300	2.300	1.800	0.800	-0.050	-0.050	-0.050	0.0	-0.050	-0.050	-0.050
ALKALINITY	385.000	365.000	370.000	310.000	350.000	340.000	335.000	340.000	360.000	400.000	410.000
CYANIDE	0.020	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	0.0	-0.010	-0.010
BORON	-0.100	0.300	0.100	2.200	0.100	0.100	0.0	0.600	0.100	0.200	0.100
BARIUM	-1.000	-1.000	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILVER	0.010	0.020	0.030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.080	0.090	0.060	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	-0.100	0.100	0.0	0.0	0.0	0.0	-0.100	-0.100
COD	50.000	7.000	0.0	4.600	0.0	0.0	5.000	0.0	10.000	10.000	0.0
NITRITE-N	0.0	0.0	0.0	-0.020	-0.100	-0.100	-0.010	0.0	0.600	19.000	0.040
BROMIDE	0.0	0.0	0.0	0.800	0.0	0.0	0.0	0.0	0.0	0.200	-0.100

SAMPLES	13	14	15	16	17	18	19	20	21	22	23
C.O.D.	0.0	0.0	0.0	5.000	16.000	0.0	0.0	0.0	0.0	14.900	6.900
PHENOLS	0.0	0.0	0.0	-0.001	-0.001	0.0	0.0	0.0	0.0	0.013	-0.010
KJELDAHL N	0.0	0.0	0.0	0.300	2.000	3.400	-0.100	2.000	2.700	3.400	3.400
BERYLLIUM	0.0	0.0	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.000	1.800
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	-0.100	-0.100	-0.100	0.100	-0.100	-0.100	-0.100
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	0.900	-0.100	0.0	2.000	0.400	0.200
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	3.000	0.0	0.0	0.0	0.0	5.500
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	-0.010	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	250.000	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	40.000	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.800	0.0
SPECTROGRAPHIC											
ALUMINUM	1.000	2.000	0.500	0.0	0.100	0.0	0.010	0.0	0.0	0.010	0.050
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.001	0.050	0.010	0.0	0.0	0.0	0.010	0.0	0.0	0.010	0.010
BERYLIUM	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.500	0.010	0.500	0.0	0.200	0.0	0.200	0.0	0.0	0.500	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	0.0	99999.000	0.0	99999.000	0.0	0.0	99999.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.001	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COBALT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.010	0.050	0.010	0.0	0.010	0.0	0.001	0.0	0.0	0.010	0.001
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.500	2.000	0.500	0.0	0.010	0.0	0.020	0.0	0.0	0.010	0.001
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.0	0.100	0.001	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0
LITHIUM	0.001	0.001	0.001	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.001
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	99999.000	99999.000	0.0	99999.000	0.0	99999.000	0.0	0.0	99999.000	99999.000
MANGANESE	0.100	0.500	0.050	0.0	0.010	0.0	0.010	0.0	0.0	0.001	0.001
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.010	0.0	0.010	0.0	0.020	0.0	0.0	0.050	0.010
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	13	14	15	16	17	18	19	20	21	22	23
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	1.000	0.010	0.010	0.0	0.100	0.0	0.010	0.0	0.0	0.010	0.100
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	5.000	10.000	5.000	0.0	5.000	0.0	5.000	0.0	0.0	2.000	0.0
SILVER	0.001	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SODIUM	5.000	5.000	5.000	0.0	5.000	0.0	5.000	0.0	0.0	99999.000	0.0
STRONTIUM	0.100	0.100	0.100	0.0	0.100	0.0	0.100	0.0	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.001	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.010	0.100	0.010	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB#-741-40F OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 152023.39 Y- 218255.72 Z- 6929.06
DATE DRILL COMPL-120475 DATE CONV TO MONITOR- 0 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
DATE	32975	41575	42975	51475	52975	61175	63075	71575	80575	82875	100975	112175
DEPTH	37.14	39.06	38.92	37.88	30.72	29.00	24.95	29.82	31.31	31.39	35.33	36.81
TEMP	46.2	47.8	57.2	50.5	49.6	51.8	52.0	51.4	50.6	48.0	47.7	46.9
LAB ID												
LAB NUM	9024	186	187	438	439	899	2261	1543	2049	2765	3443	4657
METHOD	3	3	3	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A	A
WET												
ALUMINUM	-0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AMMONIA	1.000	0.600	0.200	0.900	0.200	0.400	0.0	0.200	-0.100	0.200	-0.100	0.200
ARSENIC	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
BICARBONAT	495.000	510.000	510.000	440.000	370.000	380.000	435.000	450.000	460.000	460.000	430.000	440.000
CADMIUM	-0.010	-0.010	-0.010	0.030	0.010	0.010	0.040	0.020	-0.010	-0.010	-0.010	0.020
CALCIUM	64.000	90.000	60.000	85.000	85.000	110.000	80.000	88.000	77.000	39.000	90.000	110.000
CARBONATE	-0.100	-0.100	-0.100	15.000	36.000	27.000	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100
CHLORIDE	8.300	14.000	11.000	14.000	14.000	14.000	8.200	34.000	9.500	15.000	21.000	16.000
CHROMIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
COPPER	-0.010	-0.100	-0.100	-0.010	-0.100	0.100	-0.100	-0.100	0.300	0.100	-0.100	0.100
FLUORIDE	0.300	0.400	0.0	0.400	0.300	0.300	0.200	0.400	0.600	0.400	0.700	0.300
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	-0.050	-0.050	3.100	9.200	28.000	6.500	8.300	15.800	3.100	8.300	0.900	0.300
LEAD	0.040	0.070	0.200	0.200	0.300	0.200	0.060	0.070	0.200	0.300	0.060	0.200
MAGNESIUM	40.000	26.000	35.000	16.000	31.000	35.000	60.000	52.000	56.000	71.000	57.000	32.000
MERCURY	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.002	-0.002	-0.002	-0.002	-0.002	-0.001
NITRATE	1.000	5.100	3.400	5.000	0.100	4.200	4.900	3.300	3.400	3.300	3.700	2.200
PHOSPHATE	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	0.100	-0.100	-0.100	-0.100	-0.100	-0.100
POTASSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
SIL DIOXID	33.000	25.000	27.000	29.000	27.000	27.000	32.000	31.000	27.000	30.000	29.000	31.000
SODIUM	160.000	160.000	175.000	130.000	140.000	100.000	80.000	110.000	110.000	120.000	90.000	100.000
SULFATE	215.000	205.000	195.000	220.000	220.000	190.000	195.000	200.000	230.000	200.000	200.000	190.000
SULFIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.010	0.100	0.400	0.300	0.600	0.200	0.200	0.800	0.200	0.300	0.100	0.300
GROS ALPHA	0.0	13.000	2.800	4.700	4.900	1.400	7.400	2.500	8.100	7.100	8.400	13.000
GROSS BETA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.0	0.0
HARDNESS	225.000	330.000	290.000	280.000	340.000	420.000	445.000	430.000	425.000	390.000	460.000	410.000
PH	6.500	6.400	6.400	6.700	6.000	6.200	7.000	6.800	6.600	6.600	6.400	6.300
CONDUCTANC	860.000	1045.000	930.000	1000.000	980.000	1150.000	1150.000	1020.000	943.400	960.000	905.000	960.000
DIS SOLIDS	760.000	770.000	760.000	800.000	760.000	700.000	680.000	755.000	740.000	710.000	700.000	700.000
MANGANESE	0.120	1.900	1.300	2.500	1.500	1.000	0.300	5.000	0.090	3.000	0.050	5.400
ALKALINITY	405.000	420.000	420.000	372.000	329.000	332.000	355.000	370.000	375.000	375.000	350.000	360.000
CYANIDE	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.010	-0.010	-0.010	-0.010	-0.010	-0.010
BORON	1.500	2.400	3.000	-0.010	0.300	0.030	3.500	-0.010	2.000	0.500	2.100	-0.100
BARIUM	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
SILVER	-0.010	-0.010	-0.010	-0.010	-0.010	0.010	0.010	-0.010	-0.010	-0.010	0.020	-0.010
NICKEL	0.050	0.080	0.060	0.060	0.060	0.070	0.010	0.090	0.010	0.030	0.040	0.200
LITHIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DOC	0.0	41.000	100.000	7.000	8.000	15.000	39.000	30.000	38.000	5.000	250.000	292.000
NITRITE-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BROMIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
C.C.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHENOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KJELDAHL N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC												
ALUMINUM	0.100	0.200	0.100	0.100	0.050	0.010	0.050	1.000	0.050	0.050	0.050	0.200
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
BERYLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.100	0.500	0.200	0.500	0.200	0.500	0.500	0.500	0.500	0.200	0.500	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COBALT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.001	0.010	0.001	0.010	0.005	0.010	0.010	0.010	0.001	0.005	0.005	0.020
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.050	0.050	0.020	0.100	0.050	0.010	0.020	0.050	0.050	0.050	0.020	0.200
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.001
LITHIUM	0.100	0.0	0.0	0.001	0.001	0.0	0.010	0.010	0.010	0.001	0.010	0.001
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000
MANGANESE	0.010	0.010	0.001	0.010	0.001	0.001	0.005	0.050	0.005	0.005	0.005	0.050
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.010	0.001	0.001	0.001	0.0	0.001	0.0	0.0	0.001	0.0	0.0	0.001
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	0.500	1.000	1.000	0.100	1.000	0.100	1.000	1.000	1.000	0.100	0.100	1.000
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.0	0.100	0.0	0.0	0.100	0.0	0.0	0.0	0.500	0.0	0.800	0.400
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	10.000	5.000	5.000	2.000	5.000	5.000	2.000	10.000	5.000	5.000	5.000	5.000
SILVER	0.000	0.0	0.0	0.000	0.0	0.000	0.0	0.0	0.0	0.000	0.0	0.001
SODIUM	99999.000	5.000	5.000	5.000	10.000	2.000	10.000	99999.000	10.000	2.000	10.000	5.000
STRONTIUM	0.0	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
TITANIUM	0.010	0.001	0.001	0.010	0.001	0.010	0.0	0.001	0.001	0.005	0.001	0.001
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.001	0.0	0.0	0.001	0.001	0.0	0.001	0.0	0.0	0.0	0.001
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB#-741-40F OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 152023.39 Y- 218255.72 Z- 6929.06
DATE DRILL COMPL-120475 DATE CONV TO MONITOR- 0 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	13	14	15	16	17	18	19	20	21
DATE	121275	12876	21876	52176	62376	82976	92476	111476	20177
DEPTH	37.37	38.21	38.41	38.15	29.02	35.77	38.10	38.27	40.62
TEMP	46.4	46.4	45.7	47.5	50.0	49.7	48.0	47.0	46.0
LAB ID									
LAB NUM	5236	6300	6759	9525	642	2139	3540	4125	5899
METHOD	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A
WET									
ALUMINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	0.200
AMMONIA	0.600	1.700	6.400	0.200	0.0	0.600	0.0	0.0	0.0
ARSENIC	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	-0.010	0.0
BICARBONAT	450.000	445.000	450.000	390.000	395.000	420.000	390.000	465.000	435.000
CADMIUM	0.050	0.050	0.060	0.060	0.0	0.0	0.0	0.010	-0.010
CALCIUM	80.000	81.000	74.000	80.000	77.000	73.000	63.000	92.000	90.000
CARBONATE	-0.100	-0.100	-0.100	30.000	-0.100	-0.100	-0.100	-0.100	-0.100
CHLORIDE	22.000	9.400	16.000	23.000	16.000	7.100	12.000	9.600	9.300
CHROMIUM	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	-0.010	-0.010
COPPER	1.000	0.300	0.500	-0.100	0.0	0.0	0.0	-0.100	-0.100
FLUORIDE	0.400	0.200	0.300	0.300	0.200	0.200	0.300	0.200	0.200
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	8.600	2.900	17.000	0.300	-0.050	-0.050	-0.050	-0.050	-0.050
LEAD	0.100	0.200	0.200	0.090	0.0	0.0	0.0	0.010	0.010
MAGNESIUM	55.000	61.000	38.000	26.000	40.000	70.000	63.000	36.000	27.000
MERCURY	-0.001	-0.001	-0.001	-0.001	0.0	0.0	0.0	0.001	-0.001
NITRATE	4.200	2.200	4.000	4.000	3.300	2.600	0.0	0.0	3.400
PHOSPHATE	-0.100	0.100	0.100	-0.100	0.100	0.100	0.200	-0.100	-0.100
POTASSIUM	0.0	0.0	0.0	1.400	7.000	4.000	3.000	2.700	1.700
SELENIUM	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	-0.010	-0.010
SIL DIOXID	27.000	33.000	27.000	22.000	26.000	16.000	28.000	26.000	26.000
SODIUM	105.000	80.000	150.000	160.000	100.000	72.000	66.000	110.000	130.000
SULFATE	200.000	190.000	210.000	200.000	210.000	200.000	210.000	235.000	200.000
SULFIDE	0.0	0.0	0.0	-0.100	0.0	0.0	0.0	-0.100	0.600
ZINC	0.800	0.800	0.700	0.100	0.0	0.0	0.0	-0.100	-0.100
GROS ALPHA	4.300	12.000	0.0	0.0	0.0	0.0	0.0	0.200	0.0
GROSS BETA	11.000	30.000	0.0	0.0	0.0	0.0	0.0	6.000	0.0
HARDNESS	420.000	450.000	340.000	310.000	380.000	0.0	415.000	375.000	335.000
PH	6.100	6.200	6.300	-6.000	6.500	6.800	6.800	6.000	0.0
CONDUCTANC	875.000	1058.000	1050.000	1050.000	960.000	980.000	980.000	1180.000	1350.000
DIS SOLIDS	720.000	700.000	780.000	875.000	820.000	670.000	650.000	670.000	700.000
MANGANESE	7.000	9.100	8.000	-0.050	-0.050	0.0	-0.050	0.200	0.200
ALKALINITY	370.000	365.000	370.000	345.000	325.000	345.000	320.000	880.000	355.000
CYANIDE	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	-0.010	-0.010
BORON	0.100	-0.100	0.200	0.200	0.200	0.100	0.100	0.200	0.500
BARIUM	-1.000	-1.000	-1.000	0.0	0.0	0.0	0.0	0.0	0.0
SILVER	0.010	0.050	0.030	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.200	0.200	0.100	0.0	0.0	0.0	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	-0.100	0.0	0.0	0.0	-0.100	-0.100
DOC	138.000	8.000	0.0	0.0	0.0	0.0	8.000	11.000	0.0
NITRITE-N	0.0	0.0	0.0	-0.100	-0.100	0.0	0.500	22.000	0.050
BROMIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.010

SAMPLES	13	14	15	16	17	18	19	20	21
C.O.D.	0.0	0.0	0.0	85.000	0.0	0.0	0.0	30.700	9.900
PHENOLS	0.0	0.0	0.0	-0.001	0.0	0.0	0.0	0.002	-0.001
KJELDAHL N	0.0	0.0	0.0	2.000	8.800	2.700	2.700	0.700	2.000
BERYLLIUM	0.0	0.0	0.0	0.600	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.200	1.400
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100
AMMONIA-N	0.0	0.0	0.0	0.0	1.900	0.0	-0.100	0.400	0.300
DIS-ORG C	0.0	0.0	0.0	0.0	2.000	0.0	0.0	0.0	6.500
MEAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.900	0.0
SPECTROGRAPHIC									
ALUMINUM	1.000	2.000	1.000	2.000	0.0	0.0	0.0	0.020	0.010
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.001	0.050	0.010	0.010	0.0	0.0	0.0	0.010	0.010
BERYLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.500	0.010	0.500	0.500	0.0	0.0	0.0	0.500	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	99999.000	0.0	0.0	0.0	99999.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.001	0.001	0.0	0.0	0.0	0.0	0.0	0.0
COBOLT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.020	0.020	0.020	0.020	0.0	0.0	0.0	0.010	0.001
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.100	1.000	1.000	2.000	0.0	0.0	0.0	0.050	0.010
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.0	0.010	0.010	0.020	0.0	0.0	0.0	0.001	0.0
LITHIUM	0.001	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	99999.000	99999.000	99999.000	0.0	0.0	0.0	99999.000	99999.000
MANGANESE	0.100	0.500	0.200	0.200	0.0	0.0	0.0	0.100	0.100
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.001	0.0	0.010	0.020	0.0	0.0	0.0	0.050	0.010
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	13	14	15	16	17	18	19	20	21
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	1.000	0.010	0.500	2.000	0.0	0.0	0.0	0.010	0.100
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	5.000	5.000	5.000	10.000	0.0	0.0	0.0	5.000	0.0
SILVER	0.0	0.001	0.001	0.0	0.0	0.0	0.0	0.010	0.0
SODIUM	5.000	1.000	5.000	10.000	0.0	0.0	0.0	99999.000	0.0
STRONTIUM	0.100	0.100	0.100	0.100	0.0	0.0	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.010	0.010	0.100	0.100	0.0	0.0	0.0	0.0	0.0
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.005	0.010	0.0	0.0	0.0	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB#-741-40F OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 172979.34 Y- 231259.80 Z- 6463.95
DATE DRILL COMPL-120575 DATE CONV TO MONITOR- 0 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
DATE	32975	41575	42975	51475	52975	61175	63075	71575	80575	83075	101075	112075
DEPTH	0.0	48.38	47.41	46.05	44.41	42.60	40.47	44.20	45.05	42.33	43.82	44.29
TEMP	48.2	47.9	50.0	51.8	56.3	51.8	53.6	56.8	52.2	53.6	47.3	46.4
LAB ID												
LAB NUM	9025	235	236	440	441	900	2262	1544	2050	2766	3444	4658
METHOD	3	3	3	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A	A
WET												
ALUMINUM	-0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AMMONIA	-0.100	0.200	0.400	0.600	0.300	0.400	0.0	0.500	0.300	0.700	1.100	0.300
ARSENIC	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
BICARBONAT	675.000	650.000	680.000	660.000	630.000	570.000	615.000	650.000	650.000	675.000	650.000	680.000
CADMIUM	-0.010	0.010	-0.010	0.020	0.030	0.070	0.020	0.090	-0.010	-0.010	-0.010	0.010
CALCIUM	77.000	190.000	140.000	170.000	210.000	150.000	160.000	125.000	135.000	58.000	140.000	130.000
CARBONATE	-0.100	-0.100	-0.100	18.000	6.000	24.000	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100
CHLORIDE	19.000	19.000	23.000	27.000	21.000	27.000	12.000	30.000	14.000	11.000	21.000	26.000
CHROMIUM	-0.010	-0.050	-0.050	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
COPPER	-0.010	-0.100	0.100	-0.100	-0.100	0.100	-0.100	-0.100	-0.100	0.500	-0.100	2.400
FLUORIDE	0.200	0.300	0.200	-0.100	0.200	0.200	0.100	0.200	0.600	0.200	0.500	0.200
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	-0.050	6.300	6.300	4.300	5.000	6.000	15.000	8.900	7.700	8.500	6.400	7.200
LEAD	0.040	0.200	0.300	0.300	0.400	0.100	0.100	0.700	0.080	0.800	0.100	1.000
MAGNESIUM	115.000	67.000	90.000	35.000	3.700	84.000	81.000	95.000	105.000	145.000	110.000	93.000
MERCURY	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.002	-0.002	-0.002	-0.002	-0.002	0.002
NITRATE	1.600	0.300	4.000	12.000	13.000	19.000	17.000	20.000	21.000	16.500	17.000	15.000
PHOSPHATE	-0.100	0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100
POTASSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
SIL DIOXID	40.000	32.000	33.000	34.000	37.000	36.000	37.000	41.000	39.000	38.000	35.000	36.000
SODIUM	255.000	210.000	240.000	300.000	290.000	260.000	270.000	230.000	290.000	240.000	210.000	280.000
SULFATE	570.000	580.000	580.000	540.000	540.000	600.000	650.000	550.000	720.000	600.000	610.000	600.000
SULFIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.030	0.300	0.100	0.400	0.500	3.200	1.300	1.400	0.200	0.0	0.400	1.200
GROS ALPHA	3.900	15.000	15.000	11.000	17.000	7.600	8.100	14.000	20.000	21.000	13.000	30.000
GROSS BETA	0.0	0.0	0.0	0.0	0.0	0.0	8.000	12.000	0.0	35.000	0.0	0.0
HARDNESS	670.000	750.000	720.000	570.000	540.000	720.000	730.000	700.000	765.000	745.000	810.000	710.000
PH	6.400	6.400	6.400	6.800	6.100	6.200	7.000	7.200	7.200	6.000	6.000	6.300
CONDUCTANC	1980.000	1930.000	1875.000	1860.000	1940.000	2070.000	2220.000	1764.000	2252.000	1620.000	1590.000	1620.000
DIS SOLIDS	1410.000	1420.000	1420.000	1460.000	1430.000	1490.000	1540.000	1420.000	1640.000	1450.000	1470.000	1510.000
MANGANESE	0.330	1.000	1.200	1.700	3.500	2.800	4.000	4.500	5.800	15.000	0.100	9.800
ALKALINITY	555.000	530.000	560.000	555.000	525.000	490.000	505.000	535.000	530.000	550.000	530.000	560.000
CYANIDE	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.010	-0.010	-0.010	-0.010	-0.010	-0.010
BORON	0.400	3.700	4.200	27.000	0.200	0.070	0.400	0.500	1.900	1.000	0.600	0.100
BARIUM	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
SILVER	-0.010	-0.010	-0.010	-0.010	-0.010	0.070	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
NICKEL	0.020	0.040	0.030	0.050	0.080	0.100	0.040	0.100	0.060	0.020	0.100	0.200
LITHIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DOC	0.0	63.000	32.000	32.000	32.000	34.000	70.000	50.000	88.000	42.000	115.000	98.000
NITRITE-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BROMIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
C.O.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHENOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KJELDAHL N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC												
ALUMINUM	0.200	0.100	0.010	0.010	0.100	0.010	0.100	0.500	0.100	0.050	0.100	0.500
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.0	0.0	0.0	0.001	0.0	0.001	0.0	0.001	0.001	0.0	0.0	0.010
BERYLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.100	0.100	0.500	0.500	0.200	0.200	0.200	0.200	0.200	0.500	0.200	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COBALT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.0	0.001	0.010	0.001	0.010	0.005	0.001	0.010	0.010	0.010	0.010	0.010
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.100	0.100	0.100	0.050	0.100	0.020	0.050	0.050	0.050	0.050	0.050	0.020
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.001	0.001
LITHIUM	0.0	0.010	0.010	0.001	0.001	0.001	0.001	0.010	0.010	0.010	0.0	0.001
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000
MANGANESE	0.100	0.001	0.005	0.010	0.010	0.001	0.010	0.100	0.005	0.010	0.010	0.050
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.050	0.0	0.001	0.0	0.0	0.0	0.001	0.0	0.0	0.005	0.0	0.0
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	0.100	0.100	0.500	0.010	0.500	1.000	1.000	0.500	1.000	1.000	0.100	1.000
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.500	0.700	0.200	0.100	0.400	0.400	0.500	0.100	0.400	0.0	1.000	0.600
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	10.000	2.000	5.000	2.000	5.000	5.000	5.000	5.000	5.000	2.000	5.000	5.000
SILVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000	0.0
SODIUM	99999.000	5.000	10.000	10.000	10.000	5.000	10.000	99999.000	10.000	10.000	2.000	5.000
STRONTIUM	0.0	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.010	0.001	0.0	0.010	0.010	0.0	0.0	0.001	0.001	0.001	0.001	0.001
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.010	0.0	0.001	0.0	0.001
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JC34-741-40F OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 172979.34 Y- 231259.80 Z- 6463.95
DATE DRILL COMPL-120575 DATE CONV TO MONITOR- 0 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	13	14	15	16	17	18	19	20	21	22	23
DATE	121275	12876	21876	41376	52176	62376	73176	82976	92476	111576	20177
DEPTH	44.56	44.54	44.71	45.32	44.23	43.83	44.78	43.86	45.49	43.13	44.85
TEMP	49.0	48.2	47.3	49.5	49.1	52.0	53.0	48.5	49.0	43.5	48.7
LAB ID											
LAB NUM	5237	6301	6760	8369	9526	643	1503	2142	3541	4346	5900
METHOD	3	3	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A
WET											
ALUMINUM	0.0	0.0	0.0	1.200	0.0	0.0	0.0	0.0	0.0	-0.100	0.100
AMMONIA	1.200	0.600	1.700	0.600	0.700	0.0	0.0	0.500	0.0	0.0	0.0
ARSENIC	-0.010	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	0.0	-0.010	0.0
BICARBONAT	680.000	665.000	665.000	520.000	660.000	550.000	505.000	560.000	475.000	500.000	640.000
CADMIUM	1.100	0.040	0.050	0.050	0.040	0.0	0.0	0.0	0.0	-0.010	-0.010
CALCIUM	160.000	120.000	110.000	140.000	120.000	110.000	97.000	88.000	67.000	77.000	110.000
CARBONATE	-0.100	-0.100	-0.100	38.000	-0.100	-0.100	-0.100	18.000	-0.100	48.000	-0.100
CHLORIDE	27.000	20.000	13.000	27.000	24.000	20.000	20.000	9.900	9.600	41.000	15.000
CHROMIUM	-0.010	-0.010	-0.010	0.200	-0.010	0.0	0.0	0.0	0.0	-0.010	-0.010
COPPER	1.600	1.800	0.200	0.100	-0.100	0.0	0.0	0.0	0.0	-0.100	-0.100
FLUORIDE	0.300	0.200	0.200	0.300	0.300	0.200	0.300	0.100	0.300	0.200	0.200
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	7.700	16.100	17.000	0.400	0.300	-0.050	-0.050	-0.050	0.050	0.100	-0.050
LEAD	0.400	0.200	0.200	0.050	0.030	0.0	0.0	0.0	0.0	0.030	0.030
MAGNESIUM	88.000	105.000	67.000	96.000	62.000	88.000	100.000	105.000	110.000	115.000	110.000
MERCURY	-0.001	-0.001	-0.001	-0.001	-0.001	0.0	0.0	0.0	0.0	-0.001	-0.001
NITRATE	165.000	14.000	8.500	3.300	2.300	14.000	10.000	16.000	0.0	0.0	12.500
PHOSPHATE	-0.100	-0.100	0.100	-0.100	-0.100	0.200	-0.100	0.100	0.300	0.200	-0.100
POTASSIUM	0.0	0.0	0.0	6.600	1.600	12.000	3.500	6.000	6.000	14.000	3.000
SELENIUM	-0.010	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	0.0	-0.010	-0.010
SIL DIOXID	34.000	34.000	33.000	33.000	34.000	34.000	34.000	21.000	35.000	32.000	33.000
SODIUM	260.000	220.000	180.000	240.000	350.000	220.000	230.000	230.000	230.000	190.000	190.000
SULFATE	580.000	580.000	340.000	680.000	700.000	550.000	640.000	600.000	680.000	500.000	520.000
SULFIDE	0.0	0.0	0.0	-0.100	-0.100	0.0	0.0	0.0	0.0	0.200	-0.100
ZINC	1.200	1.000	0.800	0.700	-0.100	0.0	0.0	0.0	0.0	-0.100	-0.100
GROS ALPHA	31.000	26.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.500	6.600
GROSS BETA	0.0	4.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.000	0.0
HARDNESS	760.000	730.000	560.000	0.0	555.000	640.000	660.000	0.0	630.000	665.000	740.000
PH	6.200	6.400	6.500	6.400	6.400	6.400	6.200	6.800	6.100	6.300	0.0
CONDUCTANC	1630.000	1889.000	1600.000	1560.000	2050.000	1620.000	1950.000	1840.000	1740.000	1800.000	1650.000
DIS SOLIDS	1650.000	1450.000	1150.000	1330.000	1570.000	1490.000	1110.000	1380.000	1320.000	1270.000	1340.000
MANGANESE	6.600	4.300	11.000	4.800	-0.050	-0.050	-0.050	0.0	0.300	0.100	0.050
ALKALINITY	560.000	545.000	545.000	460.000	540.000	450.000	415.000	475.000	390.000	455.000	525.000
CYANIDE	0.010	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	0.0	-0.010	-0.010
BORON	0.200	0.100	0.300	4.800	0.200	0.100	0.0	0.600	0.100	0.300	0.200
BARIUM	-1.000	-1.000	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILVER	0.010	0.040	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.100	0.200	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	-0.100	-0.100	0.0	0.0	0.0	0.0	-0.100	-0.100
DOC	42.000	9.000	0.0	5.600	0.0	0.0	6.000	0.0	7.000	10.000	0.0
NITRITE-N	0.0	0.0	0.0	-0.020	-0.100	0.100	-0.010	0.0	2.000	150.000	0.100
BROMIDE	0.0	0.0	0.0	0.900	0.0	0.0	0.0	0.0	0.0	0.200	-0.100

SAMPLES	13	14	15	16	17	18	19	20	21	22	23
C.O.D.	0.0	0.0	0.0	20.000	27.000	0.0	0.0	0.0	0.0	20.000	9.900
PHENOLS	0.0	0.0	0.0	-0.001	-0.001	0.0	0.0	0.0	0.0	0.013	-0.001
KJELDAHL N	0.0	0.0	0.0	2.000	2.700	2.700	-0.100	2.700	3.400	4.100	2.700
BERYLLIUM	0.0	0.0	0.0	0.0	-0.020	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.000	2.900
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	-0.100	-0.100	-0.100	-0.100	0.100	-0.100	-0.100
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	5.300	-0.100	0.0	-0.100	0.200	0.200
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	2.000	0.0	0.0	0.0	0.0	8.700
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	-0.010	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	20.000	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	-10.000	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC											
ALUMINUM	0.100	5.000	0.100	0.0	0.500	0.0	0.010	0.0	0.0	0.100	0.010
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.001	0.010	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.010
BERYLLIUM	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.500	0.010	0.200	0.0	0.500	0.0	0.200	0.0	0.0	0.500	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	0.0	0.0	0.0	99999.000	0.0	0.0	99999.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COBOLT	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.020	0.050	0.010	0.0	0.010	0.0	0.001	0.0	0.0	0.010	0.001
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.050	2.000	0.100	0.0	0.500	0.0	0.010	0.0	0.0	0.010	0.0
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.001	0.100	0.050	0.0	0.010	0.0	0.0	0.0	0.0	0.001	0.0
LITHIUM	0.001	0.001	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	99999.000	99999.000	0.0	0.0	0.0	99999.000	0.0	0.0	99999.000	99999.000
MANGANESE	0.050	0.500	0.200	0.0	0.200	0.0	0.001	0.0	0.0	0.500	0.100
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.001	0.001	0.001	0.0	0.010	0.0	0.010	0.0	0.0	0.020	0.010
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	13	14	15	16	17	18	19	20	21	22	23
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	1.000	0.010	0.100	0.0	0.100	0.0	0.010	0.0	0.0	0.010	0.100
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.500	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	2.000	5.000	2.000	0.0	5.000	0.0	2.000	0.0	0.0	5.000	0.0
SILVER	0.001	0.001	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0
SODIUM	5.000	5.000	5.000	0.0	5.000	0.0	5.000	0.0	0.0	99999.000	0.0
STRONTIUM	0.100	0.100	0.100	0.0	0.100	0.0	0.100	0.0	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.010	0.010	0.010	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.005	0.0
VANADIUM	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.001	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB#-741-40F OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 176608.24 Y- 223657.10 Z- 6483.67
DATE DRILL COMPL-120575 DATE CONV TO MONITOR- 0 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
DATE	33175	41575	42975	51475	52975	61175	63075	71575	80575	83075	100975	112075
DEPTH	0.0	32.28	32.25	31.98	34.50	34.60	32.04	35.39	35.41	33.23	33.87	35.53
TEMP	45.5	46.9	48.2	51.1	48.6	55.8	55.4	56.3	50.6	51.8	64.7	43.7
LAB ID												
LAB NUM	9026	237	239	442	443	901	2263	1545	2051	2767	3445	4659
METHOD	3	3	3	3	3	3	3	3	3	3	3	3
ACUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A	A
WET												
ALUMINUM	-0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AMMONIA	0.500	0.200	0.200	0.200	0.200	0.400	0.0	0.200	-0.100	0.200	-0.100	-0.100
ARSENIC	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
BICARBONAT	700.000	710.000	620.000	550.000	620.000	570.000	680.000	695.000	750.000	755.000	670.000	780.000
CADMIUM	-0.010	-0.010	-0.010	0.010	0.010	0.010	-0.010	0.030	-0.010	-0.010	-0.010	0.060
CALCIUM	28.000	110.000	87.000	81.000	110.000	100.000	125.000	100.000	98.000	54.000	120.000	170.000
CARBONATE	-0.100	-0.100	-0.100	54.000	30.000	36.000	-0.100	-0.100	-0.100	-0.100	37.000	-0.100
CHLORIDE	22.000	16.000	71.000	21.000	21.000	34.000	20.000	25.000	18.000	23.000	21.000	23.000
CHROMIUM	-0.010	-0.050	-0.050	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
COPPER	-0.010	-0.100	-0.100	-0.100	-0.010	0.100	0.100	-0.100	-0.100	3.200	-0.100	0.100
FLUORIDE	0.300	0.400	0.300	0.400	0.400	0.300	0.300	0.400	0.400	0.400	1.100	0.400
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	-0.050	8.000	8.000	22.000	8.800	7.800	16.000	2.600	5.300	7.600	0.600	0.100
LEAD	0.040	0.100	0.050	0.700	0.400	0.300	0.600	0.700	0.020	0.800	0.060	0.090
MAGNESIUM	120.000	96.000	98.000	95.000	84.000	95.000	92.000	110.000	120.000	140.000	120.000	65.000
MERCURY	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.002	-0.002	-0.002	-0.002	-0.002	-0.001
NITRATE	2.500	2.900	2.300	4.200	2.500	3.000	3.300	2.700	3.600	2.100	2.500	1.400
PHOSPHATE	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	0.200	-0.100	-0.100	-0.100	-0.100
POTASSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
SIL DIOXID	37.000	35.000	32.000	33.000	34.000	33.000	40.000	38.000	34.000	35.000	32.000	34.000
SODIUM	265.000	230.000	230.000	210.000	210.000	230.000	220.000	165.000	240.000	220.000	170.000	240.000
SULFATE	450.000	480.000	450.000	420.000	410.000	500.000	500.000	390.000	580.000	470.000	450.000	440.000
SULFIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.040	0.200	0.030	0.300	0.0	0.500	0.700	1.600	0.100	0.900	-0.100	0.500
GROS ALPHA	0.0	14.000	11.000	7.800	9.000	7.600	11.000	13.000	7.200	8.400	13.000	22.000
GROSS BETA	0.0	0.0	0.0	0.0	0.0	0.0	3.000	1.000	0.0	4.200	0.0	0.0
HARDNESS	550.000	670.000	620.000	590.000	620.000	640.000	685.000	690.000	730.000	700.000	800.000	680.000
PH	6.400	6.500	6.800	6.800	6.200	6.400	6.800	6.900	6.800	6.200	6.200	6.400
CONDUCTANC	1511.000	1700.000	1550.000	1650.000	1650.000	1710.000	2090.000	1778.000	1525.000	1580.000	1490.000	1680.000
DIS SOLIDS	1270.000	1280.000	1210.000	1190.000	1200.000	1320.000	1350.000	1170.000	1460.000	1320.000	1290.000	1350.000
MANGANESE	0.090	6.400	0.100	2.900	0.500	2.100	3.500	7.500	2.600	17.000	0.300	8.800
ALKALINITY	570.000	580.000	510.000	494.000	535.000	499.000	555.000	570.000	615.000	620.000	580.000	640.000
CYANIDE	-0.010	0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.010
BORON	0.400	1.200	4.700	0.060	10.000	0.030	4.000	0.090	2.100	0.800	0.800	0.200
BARIUM	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
SILVER	-0.010	-0.010	-0.010	-0.010	-0.010	0.010	0.010	-0.010	-0.010	-0.010	0.010	-0.010
NICKEL	0.040	0.070	0.010	0.100	0.040	0.100	0.080	0.100	0.010	0.200	0.060	0.200
LITHIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COD	0.0	64.000	54.000	18.000	60.000	10.000	135.000	100.000	66.000	35.000	270.000	259.000
NITRITE-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BROMIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
C.O.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHENOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KJELDAHL N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC												
ALUMINUM	0.100	0.010	0.010	0.010	0.010	0.050	0.050	1.000	0.100	0.100	0.050	0.100
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.001	0.0	0.0	0.0	0.001
BERYLLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.100	0.200	0.500	0.500	0.200	0.500	0.200	0.500	0.100	0.200	0.500	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	10.000	99999.000	10.000	99999.000	99999.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COBOLT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.010	0.005	0.010	0.001	0.010	0.001	0.005	0.020	0.010	0.005	0.005	0.010
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.050	0.050	0.010	0.050	0.020	0.010	0.020	0.020	0.020	0.020	0.020	0.100
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LITHIUM	0.100	0.001	0.001	0.001	0.0	0.001	0.010	0.010	0.010	0.010	0.001	0.001
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	9999.000	99999.000	99999.000	99999.000	99999.000	10.000	99999.000	10.000	99999.000	99999.000	99999.000
MANGANESE	0.010	0.001	0.001	0.010	0.001	0.0	0.010	0.100	0.005	0.005	0.010	0.100
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.010	0.0	0.0	0.001	0.0	0.0	0.0	0.005	0.0	0.0	0.001	0.001
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	0.100	0.100	0.100	0.100	0.100	1.000	1.000	1.000	1.000	1.000	0.100	0.500
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.100	0.300	0.400	0.200	0.100	0.400	0.400	0.200	0.200	0.0	1.200	0.400
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	10.000	5.000	2.000	5.000	5.000	2.000	5.000	10.000	2.000	5.000	2.000	5.000
SILVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
SODIUM	99999.000	5.000	5.000	5.000	2.000	5.000	99999.000	99999.000	99999.000	10.000	5.000	5.000
STRONTIUM	0.0	0.100	0.100	0.100	0.100	0.100	0.010	0.100	0.010	0.100	0.100	0.100
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.001	0.001	0.0	0.010	0.001	0.001	0.001	0.010	0.0	0.001	0.001	0.001
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.001	0.0	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB#-741-40F OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 176608.24 Y- 223657.10 Z- 6483.67
DATE DRILL COMPL-120575 DATE CONV TO MONITOR- 0 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	13	14	15	16	17	18	19	20	21	22	23
DATE	121275	12876	21876	41376	52176	62376	73176	82976	92476	111576	20177
DEPTH	34.00	33.62	33.53	32.40	31.83	33.71	31.59	28.11	25.04	34.00	33.10
TEMP	46.0	42.8	44.0	46.4	46.4	50.0	53.0	47.8	46.0	42.8	44.2
LAB ID											
LAB NUM	5238	6302	6761	8370	9527	644	1501	2143	3543	4347	5901
METHOD	3	3	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A
WET											
ALUMINUM	0.0	0.0	0.0	-0.100	0.0	0.0	0.0	0.0	0.0	-0.100	0.900
AMMONIA	-0.100	0.800	1.400	0.600	0.100	0.0	0.0	0.200	0.0	0.0	0.0
ARSENIC	-0.010	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	0.0	-0.010	0.0
BICARBONAT	710.000	780.000	745.000	610.000	560.000	580.000	600.000	630.000	665.000	575.000	810.000
CADMIUM	0.050	0.040	0.040	0.050	0.080	0.0	0.0	0.0	0.0	-0.010	-0.010
CALCIUM	130.000	110.000	115.000	130.000	52.000	90.000	98.000	89.000	105.000	56.000	110.000
CARBONATE	-0.100	-0.100	-0.100	21.000	18.000	-0.100	-0.100	18.000	-0.100	48.000	-0.100
CHLORIDE	31.000	22.000	18.000	20.000	14.000	21.000	17.000	18.000	23.000	28.000	12.000
CHROMIUM	-0.010	-0.010	-0.010	0.200	-0.010	0.0	0.0	0.0	0.0	-0.010	-0.010
COPPER	6.200	2.700	3.700	0.200	0.100	0.0	0.0	0.0	0.0	-0.100	-0.100
FLUORIDE	0.500	0.200	0.400	0.500	0.400	0.300	0.400	0.100	0.400	0.200	0.300
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	7.700	11.600	16.000	0.400	0.200	-0.050	-0.050	-0.050	-0.050	0.070	-0.050
LEAD	0.800	0.400	0.400	0.100	0.040	0.0	0.0	0.0	0.0	0.030	0.050
MAGNESIUM	89.000	130.000	97.000	98.000	110.000	70.000	90.000	94.000	100.000	125.000	110.000
MERCURY	-0.001	-0.001	-0.001	-0.001	-0.001	0.0	0.0	0.0	0.0	-0.001	-0.001
NITRATE	1.900	2.200	3.000	0.500	4.700	3.200	4.700	3.200	0.0	0.0	1.900
PHOSPHATE	-0.100	-0.100	0.100	-0.100	-0.100	0.200	0.200	0.200	0.600	0.100	0.200
POTASSIUM	0.0	0.0	0.0	5.700	1.000	8.500	3.000	5.000	6.000	16.000	3.000
SELENIUM	-0.010	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	0.0	-0.010	-0.010
SIL DIOXID	31.000	32.000	39.000	33.000	36.000	29.000	30.000	18.000	30.000	28.000	31.000
SODIUM	200.000	160.000	200.000	160.000	450.000	180.000	180.000	150.000	180.000	165.000	200.000
SULFATE	440.000	440.000	420.000	440.000	1000.000	390.000	455.000	400.000	450.000	400.000	420.000
SULFIDE	0.0	0.0	0.0	-0.100	-0.100	0.0	0.0	0.0	0.0	0.300	0.0
ZINC	2.100	0.800	1.100	0.300	0.100	0.0	0.0	0.0	0.0	-0.100	-0.100
GROS ALPHA	28.000	17.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.600	5.800
GROSS BETA	0.0	11.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HARDNESS	700.000	820.000	640.000	0.0	570.000	510.000	615.000	0.0	675.000	660.000	730.000
PH	6.200	6.600	6.400	6.600	6.200	6.200	6.700	0.0	6.000	6.400	0.0
CONDUCTANC	1480.000	1820.000	1780.000	1770.000	1550.000	1210.000	1620.000	1630.000	1550.000	1600.000	1640.000
DIS SOLIDS	1280.000	1330.000	1370.000	1320.000	2090.000	1150.000	1090.000	1190.000	1230.000	1080.000	1330.000
MANGANESE	27.000	4.200	18.000	4.800	0.070	-0.050	-0.050	0.0	0.080	-0.050	0.500
ALKALINITY	580.000	640.000	610.000	520.000	475.000	475.000	490.000	530.000	545.000	51.000	665.000
CYANIDE	-0.010	-0.010	-0.010	-0.010	-0.010	0.0	0.0	0.0	0.0	-0.010	0.0
BORON	0.200	0.200	0.200	0.040	0.200	0.200	0.0	0.300	0.100	0.400	3.400
BARIUM	-1.000	-1.000	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILVER	0.020	0.040	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.200	0.100	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	-0.100	-0.100	0.0	0.0	0.0	0.0	-0.100	-0.100
DOC	84.000	6.000	0.0	2.900	0.0	0.0	5.000	0.0	6.000	24.000	0.0
NITRITE-N	0.0	0.0	0.0	-0.020	-0.100	-0.100	-0.010	0.0	0.700	35.000	0.030
BROMIDE	0.0	0.0	0.0	0.800	0.0	0.0	0.0	0.0	0.0	0.400	-0.100

SAMPLES	13	14	15	16	17	18	19	20	21	22	23
C.O.D.	0.0	0.0	0.0	5.000	15.000	0.0	0.0	0.0	0.0	20.000	-1.000
PHENOLS	0.0	0.0	0.0	-0.001	-0.001	0.0	0.0	0.0	0.0	0.007	0.0
KJELDAHL N	0.0	0.0	0.0	1.400	1.400	2.000	-0.100	2.000	2.000	2.000	2.000
BERYLLIUM	0.0	0.0	0.0	0.0	-0.020	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.800	3.900
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	-0.100	0.100	0.200	-0.100	0.400	-0.100	0.100
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	1.100	-0.100	0.0	-0.100	0.400	0.200
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	2.000	0.0	0.0	0.0	0.0	5.500
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	-0.010	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	150.000	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	20.000	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC											
ALUMINUM	1.000	5.000	5.000	0.0	0.500	0.0	0.010	0.0	0.0	0.100	1.000
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.010	0.010	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLIUM	0.0	0.001	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.500	0.010	0.100	0.0	0.500	0.0	0.200	0.0	0.0	0.500	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	0.0	0.0	0.0	99999.000	0.0	0.0	99999.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.010	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COBALT	0.0	0.001	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.020	0.050	0.050	0.0	0.020	0.0	0.001	0.0	0.0	0.010	0.001
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.001	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.100	1.000	5.000	0.0	0.500	0.0	0.010	0.0	0.0	0.010	0.200
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.001	0.100	0.010	0.0	0.010	0.0	0.0	0.0	0.0	0.001	0.001
LITHIUM	0.001	0.001	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	99999.000	99999.000	0.0	0.0	0.0	99999.000	0.0	0.0	99999.000	99999.000
MANGANESE	0.100	0.500	0.200	0.0	0.010	0.0	0.0	0.0	0.0	0.010	0.100
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.010	0.001	0.0	0.0	0.010	0.0	0.010	0.0	0.0	0.050	0.001
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.001	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	13	14	15	16	17	18	19	20	21	22	23
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	1.000	0.010	1.000	0.0	0.100	0.0	0.010	0.0	0.0	0.010	0.010
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	5.000	5.000	99999.000	0.0	5.000	0.0	5.000	0.0	0.0	5.000	0.0
SILVER	0.001	0.020	0.0	0.0	0.0	0.0	0.100	0.0	0.0	0.001	0.0
SODIUM	5.000	5.000	2.000	0.0	5.000	0.0	5.000	0.0	0.0	99999.000	0.0
STRONTIUM	0.100	0.100	0.100	0.0	0.100	0.0	0.100	0.0	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.001	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.010	0.050	0.500	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.010	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.010	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB#-741-40 OWNER-PIC BLANCO OIL SHALE PROJECT LOCATIONS: X- 0.0 Y- 0.0 Z- 0.0
DATE DRILL COMPL- 62175 DATE CONV TO MONITOR- 62175 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
DATE	63075	71575	80575	93075	100975	112075	121275	12876	21876	52076	62276	73176
DEPTH	52.00	55.69	56.39	54.50	53.60	53.11	51.46	50.81	53.27	51.77	53.24	55.20
TEMP	53.8	55.4	53.6	52.2	50.2	48.2	49.6	47.8	47.0	50.3	54.0	53.0
LAB ID												
LAB NUM	2264	1546	2052	2768	3446	4660	5239	6303	6766	9528	645	1504
METHOD	3	3	3	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A	A
WET												
ALUMINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AMMONIA	0.0	0.300	0.300	0.200	0.0	0.200	-0.100	1.100	0.0	-0.100	0.0	0.0
ARSENIC	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.010	0.0	0.0
BICARBONAT	600.000	530.000	610.000	520.000	490.000	570.000	580.000	575.000	490.000	585.000	520.000	465.000
CADMIUM	0.030	-0.010	-0.010	-0.010	-0.010	0.040	0.050	0.020	-0.010	0.060	0.0	0.0
CALCIUM	86.000	98.000	140.000	140.000	110.000	240.000	120.000	88.000	100.000	120.000	86.000	100.000
CARBONATE	-0.100	-0.100	-0.100	18.000	28.000	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100
CHLORIDE	16.000	23.000	8.200	14.000	21.000	18.000	21.000	16.000	9.400	24.000	17.000	16.000
CHROMIUM	-0.010	-0.010	-0.010	-0.010	0.0	-0.010	-0.010	-0.010	-0.010	-0.010	0.0	0.0
COPPER	0.100	-0.100	-0.100	2.600	0.300	8.000	4.100	0.200	-0.100	-0.100	0.0	0.0
FLUORIDE	0.100	0.300	0.600	0.300	0.600	0.300	0.400	0.200	0.200	0.100	0.200	0.300
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	16.000	15.000	8.700	6.200	16.000	2.800	6.700	7.200	17.000	0.100	-0.050	0.830
LEAD	0.700	0.100	0.060	0.900	0.0	13.000	0.800	0.200	0.020	0.040	0.0	0.0
MAGNESIUM	115.000	120.000	77.000	82.000	110.000	12.000	90.000	110.000	83.000	97.000	95.000	83.000
MERCURY	-0.002	-0.002	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001	0.0	0.0
NITRATE	6.900	5.000	7.000	1.000	7.800	4.600	5.000	5.200	6.400	4.700	4.200	5.800
PHOSPHATE	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	0.200	-0.100	0.100	0.100
POTASSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.100	10.000	3.000
SELENIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.0	0.0
SIL DIOXID	40.000	43.000	38.000	36.000	29.000	32.000	29.000	31.000	29.000	42.000	30.000	24.000
SODIUM	235.000	165.000	310.000	220.000	170.000	220.000	240.000	180.000	190.000	205.000	180.000	205.000
SULFATE	615.000	550.000	780.000	600.000	540.000	540.000	570.000	520.000	550.000	500.000	550.000	620.000
SULFIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	0.0	0.0
ZINC	1.100	5.700	0.300	0.900	1.000	2.000	1.300	0.600	-0.100	-0.100	0.0	0.0
GROS ALPHA	11.000	5.000	9.800	11.000	12.000	21.000	19.000	24.000	0.0	0.0	0.0	0.0
GROSS BETA	5.000	8.000	0.0	30.000	0.0	0.0	0.0	24.000	0.0	0.0	0.0	0.0
HARDNESS	700.000	730.000	665.000	685.000	710.000	640.000	680.000	680.000	590.000	705.000	605.000	590.000
PH	6.800	6.900	6.800	6.200	6.400	6.000	6.100	6.400	6.400	6.600	6.700	6.400
CONDUCTANC	2000.000	1760.000	1615.000	1420.000	1670.000	1540.000	1620.000	1700.000	1590.000	1725.000	1800.000	1640.000
DIS SOLIDS	1420.000	1280.000	1670.000	1640.000	1270.000	1350.000	1370.000	1320.000	1270.000	1420.000	1310.000	1190.000
MANGANESE	12.000	14.000	0.090	2.400	0.200	7.500	5.000	0.600	0.100	-0.050	-0.050	7.800
ALKALINITY	490.000	435.000	500.000	440.000	420.000	470.000	470.000	470.000	400.000	480.000	425.000	380.000
CYANIDE	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.010	-0.010	-0.010	0.0	0.0
BORON	-0.010	0.100	0.500	2.000	0.800	-0.100	0.300	0.100	0.500	0.200	0.200	0.0
BARIUM	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.0	0.0	0.0
SILVER	0.030	-0.010	-0.010	-0.010	0.0	-0.010	0.010	0.010	-0.010	0.0	0.0	0.0
NICKEL	0.200	0.060	0.030	0.090	0.070	0.200	0.200	0.080	0.030	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	0.0	0.0
DOC	174.000	170.000	107.000	61.000	130.000	108.000	122.000	8.000	0.0	0.0	0.0	6.000
NITRITE-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100	-0.010
BROMIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
C.O.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.000	0.0	0.0
PHENOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.001	0.0	0.0
KJELDAHL N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	1.400	-0.100
BERYLLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.500	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100	0.100
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.400	-0.100
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.0
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-10.000
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-10.000
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC												
ALUMINUM	0.010	1.000	0.050	0.100	0.050	1.000	0.500	0.100	5.000	0.500	0.0	2.000
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.0	0.010	0.0	0.001	0.0	0.0	0.001	0.0	0.050	0.0	0.0	0.0
BERYLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.500	0.500	0.200	0.500	0.500	0.500	0.500	0.010	0.100	0.500	0.0	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	10.000	99999.000	99999.000	0.0	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.020	0.0	0.0	0.010
COBALT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.005	0.020	0.010	0.001	0.005	0.020	0.010	0.050	0.050	0.010	0.0	0.020
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.001
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.020	0.500	0.050	0.010	0.020	0.050	0.500	0.500	5.000	0.100	0.0	1.000
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.0	0.010	0.0	0.001	0.001	0.0	0.0	0.200	0.020	0.001	0.0	0.010
LITHIUM	0.010	0.010	0.001	0.001	0.010	0.001	0.001	0.010	0.0	0.0	0.0	0.001
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	10.000	99999.000	99999.000	0.0	99999.000
MANGANESE	0.005	0.100	0.001	0.010	0.005	0.050	0.100	0.050	0.500	0.010	0.0	0.010
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.001	0.010	0.0	0.001	0.001	0.001	0.001	0.001	0.0	0.010	0.0	0.050
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	1.000	1.000	0.100	0.100	0.100	2.000	1.000	0.100	1.000	0.100	0.0	1.000
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.500	0.100	0.300	0.0	0.600	0.0	0.200	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	5.000	10.000	5.000	5.000	5.000	2.000	5.000	2.000	99999.000	5.000	0.0	5.000
SILVER	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.001	0.0	0.100	0.0	0.010
SODIUM	10.000	99999.000	5.000	5.000	10.000	10.000	5.000	99999.000	2.000	0.0	0.0	10.000
STRONTIUM	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.0	1.000
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.001	0.0	0.001
TITANIUM	0.0	0.010	0.010	0.001	0.001	0.001	0.005	0.001	1.000	0.010	0.0	0.010
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.020	0.0	0.0	0.001
YTTERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.001	0.001	0.001	0.001	0.001	0.001	0.010	0.020	0.0	0.0	0.001
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.0

JOB#-741-40 OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 0.0 Y- 0.0 Z- 0.0
DATE DRILL COMPL- 62175 DATE CONV TO MONITOR- 62175 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	13	14	15
DATE	82976	111476	20177
DEPTH	58.18	49.11	55.17
TEMP	51.4	46.5	48.6
LAB ID			
LAB NUM	2144	4348	5902
METHOD	3	3	3
AQUIF.LOC.	A	A	A
WET			
ALUMINUM	0.0	-0.100	0.200
AMMONIA	2.000	0.0	0.0
ARSENIC	0.0	-0.010	0.0
BICARBONAT	380.000	415.000	560.000
CADMIUM	0.0	-0.010	-0.010
CALCIUM	110.000	82.000	98.000
CARBONATE	36.000	96.000	-0.100
CHLORIDE	11.000	41.000	11.000
CHROMIUM	0.0	-0.010	-0.010
COPPER	0.0	-0.100	-0.100
FLUORIDE	0.100	0.200	0.200
HYDROXIDE	0.0	0.0	0.0
IRON	-0.050	0.050	0.080
LEAD	0.0	0.040	0.040
MAGNESIUM	65.000	115.000	75.000
MERCURY	0.0	-0.010	-0.001
NITRATE	59.000	0.0	4.800
PHOSPHATE	0.600	0.100	0.100
POTASSIUM	6.500	8.500	3.000
SELENIUM	0.0	-0.010	-0.010
SIL DIOXID	16.000	28.000	31.000
SODIUM	180.000	200.000	220.000
SULFATE	520.000	500.000	510.000
SULFIDE	0.0	0.400	0.0
ZINC	0.0	-0.100	-0.100
GROS ALPHA	0.0	3.600	0.0
GROSS BETA	0.0	3.000	0.0
HARDNESS	0.0	685.000	550.000
PH	6.600	6.200	0.0
CONDUCTANC	1530.000	1720.000	1550.000
DIS SOLIDS	1220.000	1230.000	1280.000
MANGANESE	0.0	-0.050	0.800
ALKALINITY	340.000	420.000	460.000
CYANIDE	0.0	-0.010	0.0
BORON	0.100	0.300	0.200
BARIUM	0.0	0.0	0.0
SILVER	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0
LITHIUM	0.0	-0.100	-0.100
DOC	0.0	0.0	0.0
NITRITE-N	0.0	5.200	0.040
BROMIDE	0.0	-0.100	-0.100

SAMPLES	13	14	15
C.O.D.	0.0	22.000	9.900
PHENOLS	0.0	-0.001	0.0
KJELDAHL N	5.400	2.000	2.700
BERYLLIUM	0.0	0.0	0.0
MOLYBDENUM	0.0	-0.100	-0.100
STRONTIUM	0.0	5.800	2.800
VANADIUM	0.0	0.0	0.0
ORTHO PHOS	0.100	-0.100	-0.100
AMMONIA-N	0.0	0.100	0.200
DIS-ORG C	0.0	0.0	6.500
MBAS	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0
SPECTROGRAPHIC			
ALUMINUM	0.0	0.100	0.500
ANTIMONY	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0
BARIUM	0.0	0.0	0.0
BERYLIUM	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0
BORON	0.0	0.500	0.500
CADMIUM	0.0	0.0	0.0
CALCIUM	0.0	99999.000	99999.000
CERIUM	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0
CHROMIUM	0.0	0.0	0.0
COBALT	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0
COPPER	0.0	0.010	0.010
DYSPROSIUM	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0
GOLD	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0
IRON	0.0	0.050	0.200
LANTHANUM	0.0	0.0	0.0
LEAD	0.0	0.0	0.001
LITHIUM	0.0	0.0	0.0
LUTETIUM	0.0	0.0	0.0
MAGNESIUM	0.0	99999.000	99999.000
MANGANESE	0.0	0.010	0.200
MERCURY	0.0	0.0	0.0
MOLYBDENUM	0.0	0.020	0.010
NEODYMIUM	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0

SAMPLES	13	14	15
PLATINUM	0.0	0.0	0.0
POTASSIUM	0.0	0.010	0.010
PRASEODYMI	0.0	0.0	0.0
RADIUM	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0
SILICON	0.0	5.000	0.0
SILVER	0.0	0.001	0.0
SODIUM	0.0	99999.000	0.0
STRONTIUM	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0
TIN	0.0	0.0	0.0
TITANIUM	0.0	0.0	0.0
TUNGSTEN	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0
ZINC	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0

JOB#-741-40 OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 0.0 Y- 0.0 Z- 0.0
DATE DRILL COMPL- 61975 DATE CONV TO MONITOR- 62075 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
DATE	63075	71575	80575	83075	100975	112075	121275	12876	21876	41376	52076	62276
DEPTH	65.49	67.36	68.00	66.24	66.60	67.48	66.17	65.93	65.58	65.36	64.98	65.91
TEMP	52.3	53.6	50.9	51.8	49.1	46.4	46.7	46.4	46.5	46.0	50.0	52.0
LAB ID												
LAB NUM	2265	1547	2053	2769	3447	4661	5240	6304	6762	8371	9529	646
METHOD	3	3	3	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A	A
WET												
ALUMINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.100	0.0	0.0
AMMONIA	0.0	0.300	-0.100	0.200	-0.100	-0.100	0.300	1.700	1.100	5.300	0.030	0.0
ARSENIC	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.0
BICARBONAT	660.000	695.000	690.000	700.000	620.000	700.000	700.000	680.000	680.000	570.000	565.000	695.000
CADMIUM	-0.010	-0.010	-0.010	-0.010	-0.010	0.010	-0.010	0.020	-0.010	-0.010	0.090	0.0
CALCIUM	66.000	77.000	68.000	51.000	100.000	190.000	110.000	52.000	69.000	110.000	37.000	55.000
CARBONATE	-0.100	-0.100	-0.100	-0.100	19.000	-0.100	-0.100	-0.100	-0.100	32.000	30.000	-0.100
CHLORIDE	18.000	21.000	12.000	16.000	21.000	16.000	27.000	16.000	16.000	17.000	24.000	20.000
CHROMIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.100	-0.010	0.0
COPPER	-0.100	-0.100	0.100	0.300	0.600	0.600	1.100	0.200	0.600	0.200	0.100	0.0
FLUORIDE	0.200	0.400	0.800	0.400	1.200	0.400	0.600	0.300	0.400	0.500	0.100	0.300
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	16.000	8.300	4.900	2.300	5.600	7.800	8.900	2.800	16.000	0.200	-0.050	-0.050
LEAD	0.070	0.200	0.100	0.400	0.100	0.200	0.200	0.100	0.100	0.100	0.300	0.0
MAGNESIUM	135.000	125.000	140.000	145.000	120.000	52.000	120.000	150.000	145.000	135.000	135.000	140.000
MERCURY	-0.002	-0.002	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	0.0
NITRATE	1.600	3.500	2.000	3.200	2.200	1.200	1.700	2.000	2.200	0.600	3.600	3.200
PHOSPHATE	0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	0.100	0.400	-0.100	-0.100
POTASSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.700	1.000	14.000
SELENIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.0
SIL DIOXID	32.000	32.000	25.000	32.000	29.000	35.000	29.000	29.000	28.000	28.000	27.000	29.000
SODIUM	185.000	250.000	175.000	230.000	230.000	265.000	230.000	185.000	215.000	175.000	225.000	200.000
SULFATE	500.000	550.000	495.000	560.000	600.000	560.000	580.000	540.000	550.000	600.000	510.000	500.000
SULFIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100	0.0
ZINC	0.600	0.400	0.200	0.100	0.300	0.100	1.100	0.300	0.200	0.300	0.100	0.0
GROS ALPHA	11.000	14.000	8.100	16.000	11.000	18.000	14.000	5.900	0.0	0.0	0.0	0.0
GROSS BETA	6.000	0.0	0.0	14.000	0.0	5.000	11.000	31.000	0.0	0.0	0.0	0.0
HARDNESS	720.000	710.000	735.000	715.000	740.000	700.000	740.000	750.000	770.000	0.0	650.000	710.000
PH	6.800	7.200	6.800	6.000	6.100	6.400	6.000	6.600	6.400	6.700	6.200	6.800
CONDUCTANC	2230.000	1914.000	1740.000	1860.000	1870.000	1625.000	1630.000	1903.000	1890.000	1840.000	1925.000	1700.000
DIS SOLIDS	1230.000	1410.000	1260.000	1380.000	1430.000	1470.000	1460.000	1440.000	1520.000	1520.000	1330.000	1560.000
MANGANESE	1.300	0.600	0.100	0.050	0.300	0.800	0.900	0.500	0.800	0.300	-0.050	-0.050
ALKALINITY	540.000	570.000	565.000	575.000	530.000	575.000	570.000	560.000	555.000	490.000	490.000	570.000
CYANIDE	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.020	0.010	-0.010	0.030	-0.010	0.0
BORON	2.600	0.300	0.400	0.500	0.500	0.400	0.700	0.700	0.300	0.030	0.200	1.200
BARIUM	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.0	0.0	0.0
SILVER	0.010	-0.010	-0.010	-0.010	0.020	-0.010	-0.010	0.010	0.010	0.0	0.0	0.0
NICKEL	0.030	0.050	0.020	0.040	0.060	0.050	0.050	0.070	0.040	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100	0.0
DOC	19.000	11.000	9.000	9.000	20.000	11.000	16.000	8.000	0.0	4.300	0.0	0.0
NITRITE-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.020	-0.100	-0.100
BROMIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.100	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
C.O.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.000	14.000	0.0
PHENOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.001	-0.001	0.0
KJELDAHL N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.300	2.000	-0.100
BERYLLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.020	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.900
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC												
ALUMINUM	0.005	0.500	0.010	0.050	0.100	1.000	0.100	0.500	0.500	0.0	0.010	0.0
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.001	0.001	0.0	0.0	0.001	0.010	0.001	0.0	0.001	0.0	0.0	0.0
BERYLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.500	0.500	0.200	0.500	0.500	0.500	0.500	0.020	0.100	0.0	0.200	0.0
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	0.0	99999.000	0.0
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.001	0.0	0.0	0.0
COBOLT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.005	0.010	0.005	0.005	0.001	0.010	0.005	0.050	0.020	0.0	0.010	0.0
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.050	0.100	0.010	0.020	0.010	0.500	0.050	0.500	0.200	0.0	0.001	0.0
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.100	0.010	0.0	0.010	0.0
LITHIUM	0.010	0.001	0.0	0.010	0.010	0.001	0.001	0.010	0.001	0.0	0.0	0.0
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	0.0	99999.000	0.0
MANGANESE	0.001	0.050	0.001	0.010	0.010	0.100	0.050	0.100	0.100	0.0	0.0	0.0
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.001	0.0	0.0	0.010	0.001	0.001	0.001	0.0	0.010	0.0
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.100	0.100	0.0	0.100	0.0
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.500	0.0	0.400	0.100	0.400	0.200	0.400	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	2.000	5.000	2.000	2.000	5.000	5.000	5.000	5.000	5.000	0.0	5.000	0.0
SILVER	0.0	0.001	0.0	0.0	0.0	0.001	0.001	0.005	0.001	0.0	0.001	0.0
SODIUM	10.000	99999.000	10.000	10.000	10.000	10.000	5.000	10.000	5.000	0.0	0.0	0.0
STRONTIUM	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0
TITANIUM	0.001	0.001	0.0	0.001	0.001	0.001	0.010	0.050	0.100	0.0	0.001	0.0
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.001	0.0	0.0	0.0	0.001	0.0	0.010	0.010	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB#-741-40 OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 0.0 Y- 0.0 Z- 0.0
DATE DRILL COMPL- 61975 DATE CONV TO MONITOR- 62075 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	13	14	15	16	17
DATE	73176	82976	92476	111476	20177
DEPTH	65.06	65.40	67.40	65.47	65.38
TEMP	54.0	49.1	48.0	48.0	46.0
LAB ID					
LAB NUM	1505	2145	3943	4349	5903
METHOD	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A
WET					
ALUMINUM	0.0	0.0	0.0	-0.100	0.100
AMMONIA	0.0	0.400	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	-0.010	0.0
BICARBONAT	615.000	565.000	640.000	510.000	670.000
CADMIUM	0.0	0.0	0.0	-0.010	-0.010
CALCIUM	69.000	84.000	100.000	67.000	85.000
CARBONATE	-0.100	42.000	-0.100	120.000	-0.100
CHLORIDE	31.000	9.900	21.000	41.000	15.000
CHROMIUM	0.0	0.0	0.0	-0.010	-0.010
COPPER	0.0	0.0	0.0	-0.100	-0.100
FLUORIDE	0.400	0.200	0.500	0.300	0.400
HYDROXIDE	0.0	0.0	0.0	0.0	0.0
IRON	-0.050	-0.050	-0.050	0.090	-0.050
LEAD	0.0	0.0	0.0	0.060	0.080
MAGNESIUM	135.000	135.000	120.000	140.000	130.000
MERCURY	0.0	0.0	0.0	-0.001	-0.001
NITRATE	2.900	4.400	0.0	0.0	2.900
PHOSPHATE	0.200	0.100	0.200	0.200	0.100
POTASSIUM	3.800	6.500	6.000	13.000	3.300
SELENIUM	0.0	0.0	0.0	-0.010	-0.010
SIL DIOXID	29.000	17.000	28.000	28.000	27.000
SODIUM	270.000	190.000	280.000	250.000	205.000
SULFATE	655.000	580.000	710.000	550.000	580.000
SULFIDE	0.0	0.0	0.0	0.600	-0.100
ZINC	0.0	0.0	0.0	-0.100	0.100
GROS ALPHA	0.0	0.0	0.0	11.600	3.300
GROSS BETA	0.0	0.0	0.0	7.000	0.0
HARDNESS	730.000	0.0	745.000	735.000	760.000
PH	6.800	6.800	0.0	6.000	0.0
CONDUCTANC	1900.000	1900.000	0.0	1850.000	2000.000
DIS SOLIDS	1410.000	1430.000	1410.000	1420.000	1450.000
MANGANESE	-0.050	0.0	0.060	-0.050	-0.050
ALKALINITY	1505.000	495.000	525.000	515.000	550.000
CYANIDE	0.0	0.0	0.0	-0.010	-0.010
BORON	0.0	3.600	0.100	0.500	0.200
BARIUM	0.0	0.0	0.0	0.0	0.0
SILVER	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	-0.100	-0.100
DOC	6.000	0.0	6.000	8.000	0.0
NITRITE-N	-0.010	0.0	0.300	2.400	0.030
BROMIDE	0.0	0.0	0.0	0.400	-0.100

SAMPLES	13	14	15	16	17
C.O.D.	0.0	0.0	0.0	20.000	5.000
PHENOLS	0.0	0.0	0.0	0.005	-0.001
KJELDAHL N	-0.100	6.100	6.100	-0.100	0.700
BERYLLIUM	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	-0.100	-0.100
STRONTIUM	0.0	0.0	0.0	6.500	3.600
VANADIUM	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	-0.100	-0.100	-0.100	-0.100	-0.100
AMMONIA-N	-0.100	0.0	0.300	-0.100	0.400
DIS-ORG C	0.0	0.0	0.0	0.0	6.300
MBAS	-0.010	0.0	0.0	0.0	0.0
TOT COLIF	60.000	0.0	0.0	0.0	0.0
FEC COLIF	-10.000	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC					
ALUMINUM	0.010	0.0	0.0	0.010	0.001
ANTIMONY	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0
BARIUM	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0
BORON	0.200	0.0	0.0	0.500	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	0.0	0.0	99999.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.0	0.0	0.0	0.0
COBALT	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0
COPPER	0.001	0.0	0.0	0.001	0.001
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0
IRON	0.010	0.0	0.0	0.010	0.001
LANTHANUM	0.0	0.0	0.0	0.0	0.0
LEAD	0.0	0.0	0.0	0.0	0.005
LITHIUM	0.0	0.0	0.0	0.0	0.0
LUTETIUM	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	0.0	0.0	99999.000	99999.000
MANGANESE	0.0	0.0	0.0	0.001	0.0
MERCURY	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.010	0.0	0.0	0.020	0.010
NEODYMIUM	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0

SAMPLES	13	14	15	16	17
PLATINUM	0.0	0.0	0.0	0.0	0.0
POTASSIUM	0.010	0.0	0.0	0.010	0.010
PRASEODYMI	0.0	0.0	0.0	0.0	0.0
RADIUM	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0
SILICON	2.000	0.0	0.0	5.000	0.0
SILVER	0.0	0.0	0.0	0.0	0.0
SODIUM	5.000	0.0	0.0	99999.000	0.0
STRONTIUM	0.100	0.0	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.0	0.0	0.0	0.0	0.0
TUNGSTEN	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.0	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0

JOB#-741-40 OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 0.0 Y- 0.0 Z- 0.0
DATE DRILL COMPL- 62075 DATE CONV TO MONITOR- 62075 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
DATE	63075	71575	80575	83075	100975	112075	121275	12876	21876	41376	52076	62276
DEPTH	28.50	30.44	30.75	28.81	29.22	30.28	29.35	29.04	28.82	28.55	28.45	28.62
TEMP	50.9	55.0	50.9	49.1	49.1	46.9	48.9	46.6	46.2	46.5	50.9	53.0
LAB ID												
LAB NUM	2267	1548	2054	2770	3448	4662	5241	6305	6763	8372	9530	647
METHOD	3	3	3	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A	A
WET												
ALUMINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.100	0.0	0.0
AMMONIA	0.0	0.300	-0.100	0.200	-0.100	0.200	-0.100	0.800	1.100	2.000	0.600	0.0
ARSENIC	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.0
BICARBONAT	600.000	525.000	590.000	605.000	590.000	600.000	600.000	600.000	600.000	530.000	620.000	615.000
CADMIUM	-0.010	0.010	-0.010	-0.010	-0.010	0.050	-0.010	0.020	0.010	-0.010	0.080	0.0
CALCIUM	96.000	84.000	84.000	50.000	110.000	170.000	130.000	90.000	88.000	130.000	62.000	62.000
CARBONATE	-0.100	-0.100	-0.100	-0.100	-0.010	-0.100	-0.100	-0.100	-0.100	18.000	-0.100	-0.100
CHLORIDE	11.000	22.000	12.000	14.000	14.000	16.000	27.000	13.000	19.000	14.000	20.000	31.000
CHROMIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.100	-0.010	0.0
COPPER	-0.100	-0.100	0.300	0.200	0.200	-0.100	1.000	0.200	0.400	0.300	-0.100	0.0
FLUORIDE	0.100	0.400	0.400	0.200	0.700	0.300	0.400	0.200	0.200	0.600	0.200	0.200
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.500	17.700	0.600	1.000	1.100	0.800	8.800	1.200	7.800	0.080	-0.050	-0.050
LEAD	0.040	0.040	0.300	0.300	0.070	0.090	0.200	0.200	0.090	0.300	0.040	0.0
MAGNESIUM	120.000	105.000	130.000	135.000	130.000	67.000	100.000	130.000	110.000	110.000	145.000	135.000
MERCURY	-0.002	-0.002	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	0.0
NITRATE	-0.100	1.600	4.500	2.900	4.400	2.300	2.800	2.800	4.000	0.700	3.100	4.600
PHOSPHATE	-0.100	-0.100	-0.100	-0.100	-0.100	0.200	-0.100	-0.100	0.100	-0.100	1.200	1.600
POTASSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.500	-1.000	14.000
SELENIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.0
SIL DIOXID	32.000	44.000	34.000	28.000	27.000	30.000	28.000	29.000	28.000	27.000	28.000	28.000
SODIUM	160.000	220.000	150.000	220.000	180.000	230.000	230.000	165.000	220.000	160.000	170.000	200.000
SULFATE	510.000	550.000	510.000	580.000	630.000	600.000	600.000	560.000	600.000	680.000	510.000	600.000
SULFIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100	0.0
ZINC	0.400	2.600	0.100	0.100	-0.100	0.100	0.700	0.200	0.200	0.600	-0.100	0.0
GROS ALPHA	3.300	16.000	8.500	10.000	9.300	23.000	25.000	8.900	0.0	0.0	0.0	0.0
GROSS BETA	0.0	0.0	0.0	18.000	0.0	27.000	12.000	2.000	0.0	0.0	0.0	0.0
HARDNESS	730.000	650.000	750.000	685.000	800.000	700.000	750.000	750.000	660.000	0.0	745.000	715.000
PH	7.000	7.000	6.800	6.100	6.100	6.000	6.000	6.100	6.100	6.500	6.600	6.900
CONDUCTANC	2275.000	1920.000	1680.000	1780.000	1670.000	1730.000	1770.000	1904.000	1760.000	1780.000	1850.000	1540.000
DIS SOLIDS	1220.000	1300.000	1210.000	1320.000	1390.000	1410.000	1450.000	1260.000	1420.000	1430.000	1380.000	1500.000
MANGANESE	0.200	13.000	0.300	-0.050	-0.050	5.500	5.200	0.300	1.000	0.100	0.060	-0.050
ALKALINITY	490.000	430.000	485.000	495.000	480.000	495.000	490.000	490.000	490.000	450.000	510.000	505.000
CYANIDE	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.0
BORON	0.900	0.100	0.600	0.600	0.300	0.100	0.100	-0.100	0.100	0.030	0.100	-0.100
BARIUM	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.0	0.0	0.0
SILVER	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.010	0.040	0.010	0.0	0.0	0.0
NICKEL	0.010	0.030	0.020	0.030	0.070	0.200	0.200	0.050	0.060	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100	0.0
DOC	44.000	75.000	10.000	20.000	7.000	90.000	42.000	8.000	0.0	3.800	0.0	0.0
NITRITE-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.020	-0.100	-0.100
BROMIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.900	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
C.O.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.500	12.000	0.0
PHENOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.001	-0.001	0.0
KJELDAHL N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.700	1.100	-0.100
BERYLLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.400	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	-0.100
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.600
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC												
ALUMINUM	0.050	0.500	0.050	0.010	0.010	0.500	0.500	0.500	0.500	0.0	0.010	0.0
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.0	0.0	0.0	0.001	0.0	0.001	0.010	0.001	0.001	0.0	0.0	0.0
BERYLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.200	0.500	0.500	0.200	0.500	0.500	0.500	0.020	0.500	0.0	0.500	0.0
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	0.0	99999.000	0.0
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.001	0.0	0.0	0.0
COBALT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.010	0.010	0.010	0.010	0.010	0.010	0.020	0.050	0.050	0.0	0.050	0.0
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.050	0.020	0.020	0.050	0.020	0.100	0.050	0.200	0.200	0.0	0.001	0.0
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.100	0.020	0.0	0.500	0.0
LITHIUM	0.001	0.010	0.010	0.001	0.001	0.001	0.001	0.010	0.001	0.0	0.0	0.0
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	0.0	99999.000	0.0
MANGANESE	0.005	0.050	0.005	0.010	0.001	0.050	0.100	0.100	0.050	0.0	0.0	0.0
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.001	0.0	0.001	0.001	0.001	0.0	0.001	0.010	0.0	0.020	0.0
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.070	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	0.100	1.000	1.000	0.100	1.000	1.000	1.000	0.010	0.010	0.0	0.100	0.0
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.0	0.100	0.200	0.0	0.200	0.100	0.300	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	5.000	10.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	0.0	5.000	0.0
SILVER	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0
SODIUM	5.000	99999.000	99999.000	2.000	5.000	10.000	5.000	5.000	5.000	0.0	10.000	0.0
STRONTIUM	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.001	0.010	0.0	0.001	0.0	0.001	0.001	0.010	0.100	0.0	0.001	0.0
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZINC	0.001	0.0	0.001	0.0	0.001	0.0	0.0	0.010	0.010	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB#-741-40 OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 0.0 Y- 0.0 Z- 0.0
DATE DRILL COMPL- 62075 DATE CONV TO MONITOR- 62075 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	13	14	15	16	17
DATE	73176	82976	92476	111476	20177
DEPTH	29.16	29.51	32.04	65.47	29.87
TEMP	52.0	48.7	49.0	47.5	46.8
LAB ID					
LAB NUM	1506	2146	3544	4333	5904
METHOD	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A
WET					
ALUMINUM	0.0	0.0	0.0	-0.100	0.200
AMMONIA	0.0	0.400	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	-0.010	0.0
BICARBONAT	555.000	520.000	575.000	710.000	600.000
CADMIUM	0.0	0.0	0.0	0.010	-0.010
CALCIUM	90.000	98.000	105.000	52.000	105.000
CARBONATE	-0.100	0.0	-0.100	-0.100	-0.100
CHLORIDE	21.000	9.900	18.000	55.000	12.000
CHROMIUM	0.0	0.0	0.0	-0.010	-0.010
COPPER	0.0	0.0	0.0	-0.100	-0.100
FLUORIDE	0.300	-0.100	0.400	0.100	0.300
HYDROXIDE	0.0	0.0	0.0	0.0	0.0
IRON	-0.050	-0.050	-0.050	-0.050	-0.050
LEAD	0.0	0.0	0.0	0.030	0.080
MAGNESIUM	115.000	120.000	120.000	140.000	115.000
MERCURY	0.0	0.0	0.0	-0.001	0.002
NITRATE	3.300	0.200	0.0	0.0	4.300
PHOSPHATE	0.100	0.100	0.200	0.100	-0.100
POTASSIUM	2.400	5.500	4.000	7.000	2.300
SELENIUM	0.0	0.0	0.0	-0.010	-0.010
SIL DIOXID	28.000	17.000	26.000	25.000	28.000
SODIUM	220.000	150.000	200.000	300.000	190.000
SULFATE	685.000	570.000	690.000	650.000	570.000
SULFIDE	0.0	0.0	0.0	0.200	1.600
ZINC	0.0	0.0	0.0	0.100	0.200
GROS ALPHA	0.0	0.0	0.0	4.700	13.000
GROSS BETA	0.0	0.0	0.0	0.0	0.0
HARDNESS	705.000	0.0	765.000	705.000	730.000
PH	6.400	6.400	6.100	6.000	0.0
CONDUCTANC	1620.000	1820.000	1830.000	1850.000	1900.000
DIS SOLIDS	1410.000	1390.000	1350.000	1380.000	1390.000
MANGANESE	-0.050	0.0	-0.050	-0.050	-0.050
ALKALINITY	455.000	450.000	470.000	580.000	490.000
CYANIDE	0.0	0.0	0.0	-0.010	-0.010
BORON	0.0	0.200	-0.100	0.400	0.100
BARIUM	0.0	0.0	0.0	0.0	0.0
SILVER	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	-0.100	-0.100
DOC	15.000	0.0	14.000	9.000	0.0
NITRITE-N	-0.010	0.0	0.100	3.900	0.030
BROMIDE	0.0	0.0	0.0	0.500	-0.100

SAMPLES	13	14	15	16	17
C.O.D.	0.0	0.0	0.0	35.000	5.000
PHENOLS	0.0	0.0	0.0	-0.001	-0.001
KJELDAHL N	-0.100	1.400	5.400	2.700	2.000
BERYLLIUM	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	-0.100	-0.100
STRONTIUM	0.0	0.0	0.0	5.500	2.600
VANADIUM	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.100	-0.100	-0.100	0.100	-0.100
AMMONIA-N	-0.100	0.0	-0.100	0.400	0.100
DIS-ORG C	0.0	0.0	0.0	0.0	9.500
MBAS	-0.010	0.0	0.0	0.0	0.0
TOT COLIF	90.000	0.0	0.0	0.0	0.0
FEC COLIF	-10.000	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC					
ALUMINUM	1.000	0.0	0.0	0.100	0.010
ANTIMONY	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0
BARIUM	0.0	0.0	0.0	0.0	0.0
BERYLIUM	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0
BORON	0.500	0.0	0.0	0.500	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	0.0	0.0	99999.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.001	0.0	0.0	0.0	0.0
COBOLT	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0
COPPER	0.020	0.0	0.0	0.010	0.001
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0
IRON	0.100	0.0	0.0	0.010	0.001
LANTHANUM	0.0	0.0	0.0	0.0	0.0
LEAD	0.050	0.0	0.0	0.001	0.010
LITHIUM	0.0	0.0	0.0	0.0	0.0
LUTETIUM	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	0.0	0.0	99999.000	99999.000
MANGANESE	0.010	0.0	0.0	0.010	0.001
MERCURY	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.010	0.0	0.0	0.050	0.010
NEODYMIUM	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0

SAMPLES	13	14	15	16	17
PLATINUM	0.0	0.0	0.0	0.0	0.0
POTASSIUM	0.010	0.0	0.0	0.010	0.0
PRASEODYMI	0.0	0.0	0.0	0.0	0.0
RADIUM	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0
SILICON	5.000	0.0	0.0	2.000	0.0
SILVER	0.0	0.0	0.0	0.0	0.0
SODIUM	5.000	0.0	0.0	99999.000	0.0
STRONTIUM	0.100	0.0	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.010	0.0	0.0	0.0	0.0
TUNGSTEN	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.008	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0
ZINC	0.001	0.0	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0

JOB#-741-40 OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 0.0 Y- 0.0 Z- 0.0
DATE DRILL COMPL- 61875 DATE CONV TO MONITOR- 61875 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
DATE	63075	71575	80575	83075	101075	112075	121275	12876	21876	41376	52076	62376
DEPTH	5.20	7.99	8.12	5.81	6.25	7.45	6.22	6.43	6.75	7.17	9.08	6.25
TEMP	52.5	51.8	50.0	10.9	46.6	46.8	46.4	44.6	44.2	46.4	45.5	48.0
LAB IO												
LAB NUM	2268	1549	2055	2771	3449	4663	5242	6306	6764	8373	9531	648
METHOD	3	3	3	3	3	3	3	3	3	3	3	3
AQUIF.LOC.	A	A	A	A	A	A	A	A	A	A	A	A
WET												
ALUMINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	0.0	0.0
AMMONIA	0.0	0.400	-0.100	0.200	-0.100	0.100	-0.100	1.100	2.000	0.200	0.500	0.0
ARSENIC	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.0
BICARBONAT	580.000	590.000	635.000	540.000	510.000	620.000	600.000	590.000	580.000	470.000	545.000	610.000
CADMIUM	-0.010	-0.010	-0.010	-0.010	-0.010	0.020	-0.010	0.030	0.020	-0.010	0.100	0.0
CALCIUM	31.000	75.000	84.000	48.000	77.000	180.000	120.000	110.000	92.000	110.000	70.000	75.000
CARBONATE	-0.100	-0.100	-0.100	30.000	31.000	-0.100	-0.100	-0.100	-0.100	32.000	36.000	-0.100
CHLORIDE	9.500	25.000	11.000	14.000	21.000	22.000	17.000	16.000	11.000	14.000	30.000	18.000
CHROMIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.200	-0.010	0.0
COPPER	-0.100	-0.100	-0.100	0.200	0.400	0.800	1.300	0.200	0.300	-0.100	0.300	0.0
FLUORIDE	0.200	0.300	0.400	0.200	0.800	0.300	0.400	0.200	0.200	0.400	0.200	0.200
HYDROXIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	2.800	13.300	1.900	8.100	1.500	7.600	8.200	3.800	8.500	0.070	-0.050	-0.050
LEAD	0.040	0.800	0.300	0.500	0.200	0.200	0.200	0.200	0.090	0.010	0.400	0.0
MAGNESIUM	145.000	81.000	110.000	140.000	120.000	40.000	92.000	100.000	80.000	100.000	105.000	110.000
MERCURY	-0.002	-0.002	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	0.0
NITRATE	5.200	4.600	5.100	8.500	7.800	4.400	5.000	6.000	8.000	2.000	4.400	8.000
PHOSPHATE	-0.100	-0.100	-0.100	-0.100	-0.100	0.100	-0.100	-0.100	0.100	-0.100	-0.100	0.100
POTASSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.100	1.000	12.000
SELENIUM	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.0
SIL DIOXIO	28.000	30.000	29.000	28.000	28.000	28.000	27.000	28.000	27.000	28.000	29.000	27.000
SODIUM	175.000	250.000	185.000	165.000	160.000	230.000	180.000	140.000	195.000	180.000	240.000	180.000
SULFATE	510.000	500.000	485.000	460.000	460.000	460.000	470.000	460.000	450.000	560.000	500.000	450.000
SULFIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.010	0.0
ZINC	0.100	1.500	0.100	0.200	-0.100	13.000	0.200	0.400	0.200	0.200	0.400	0.0
GROS ALPHA	9.300	4.700	9.100	9.300	11.000	18.000	23.000	16.000	0.0	0.0	0.0	0.0
GROSS BETA	0.0	4.000	0.0	0.0	0.0	0.0	19.000	24.000	0.0	0.0	0.0	0.0
HARDNESS	665.000	520.000	655.000	700.000	700.000	620.000	680.000	700.000	560.000	0.0	610.000	635.000
PH	7.000	7.000	7.000	6.100	6.100	6.300	6.200	6.500	6.300	6.600	6.000	6.500
CONDUCTANC	1910.000	1688.000	1490.000	1590.000	1540.000	1570.000	1600.000	1714.000	1750.000	1770.000	1725.000	1440.000
DIS SOLIDS	1190.000	1260.000	1220.000	1170.000	1160.000	1280.000	1210.000	1120.000	1230.000	1250.000	1270.000	1320.000
MANGANESE	0.100	1.100	0.100	0.800	0.060	0.800	2.100	0.600	1.000	0.200	0.700	-0.050
ALKALINITY	475.000	480.000	520.000	464.000	440.000	505.000	490.000	485.000	475.000	410.000	475.000	500.000
CYANIDE	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.020	0.010	-0.010	0.030	-0.010	0.200
BORON	0.600	-0.010	0.600	0.400	0.400	0.100	0.300	0.300	0.200	0.050	0.200	0.0
BARIUM	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.0	0.0	0.0
SILVER	-0.010	-0.010	-0.010	-0.010	0.010	-0.010	-0.010	0.040	0.030	0.0	0.0	0.0
NICKEL	0.010	0.060	0.010	0.060	0.050	0.050	0.100	0.090	0.010	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	0.100	0.0
DOC	19.000	12.000	23.000	11.000	16.000	30.000	28.000	10.000	0.0	3.900	0.0	0.0
NITRITE-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.020	-0.100	-0.100
BROMIDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.600	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
C.O.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.000	17.000	0.0
PHENOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.001	-0.001	0.0
KJELDAHL N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.400	1.400	-0.100
BERYLLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.300	0.0
MOLYBDENUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.100	-0.100
AMMONIA-N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.200
DIS-ORG C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000
MBAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEC COLIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPECTROGRAPHIC												
ALUMINUM	0.010	0.200	0.100	0.100	0.100	1.000	0.100	1.000	1.000	0.0	0.100	0.0
ANTIMONY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARIUM	0.0	0.0	0.001	0.0	0.0	0.001	0.001	0.010	0.010	0.0	0.0	0.0
BERYLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BORON	0.200	0.200	0.500	0.200	0.200	0.500	0.500	0.020	0.500	0.0	0.500	0.0
CADMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	99999.000	10.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	0.0	99999.000	0.0
CERIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.001	0.0	0.0	0.0
COBALT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COPPER	0.005	0.010	0.010	0.005	0.020	0.020	0.020	0.050	0.050	0.0	0.010	0.0
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON	0.020	0.050	0.050	0.020	0.050	0.050	0.050	1.000	1.000	0.0	0.010	0.0
LANTHANUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	0.0	0.0	0.0	0.0	0.0	0.001	0.001	0.100	0.020	0.0	0.010	0.0
LITHIUM	0.010	0.010	0.010	0.010	0.001	0.001	0.001	0.0	0.001	0.0	0.0	0.0
LUTETIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	10.000	99999.000	5.000	99999.000	99999.000	99999.000	99999.000	99999.000	99999.000	0.0	99999.000	0.0
MANGANESE	0.001	0.100	0.010	0.005	0.010	0.100	0.100	0.500	0.100	0.0	0.0	0.0
MERCURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.001	0.005	0.0	0.0	0.001	0.001	0.001	0.010	0.0	0.010	0.0
NEODYMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAMPLES	1	2	3	4	5	6	7	8	9	10	11	12
PLATINUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POTASSIUM	1.000	1.000	1.000	1.000	0.100	1.000	1.000	0.010	0.100	0.0	0.010	0.0
PRASEODYMI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RADIUM	0.400	0.200	0.200	0.0	0.700	0.0	0.600	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SILICON	5.000	10.000	5.000	5.000	5.000	2.000	2.000	10.000	5.000	0.0	5.000	0.0
SILVER	0.0	0.001	0.0	0.0	0.0	0.001	0.001	0.010	0.0	0.0	0.0	0.0
SODIUM	99999.000	99999.000	99999.000	10.000	5.000	5.000	5.000	5.000	5.000	0.0	5.000	0.0
STRONTIUM	0.100	0.100	0.010	0.100	0.100	0.100	0.100	0.100	0.100	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.0	0.0	0.0	0.001	0.001	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.0	0.001	0.0	0.0	0.001	0.001	0.010	0.050	0.100	0.0	0.001	0.0
TUNGSTEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0
ZINC	0.0	0.001	0.0	0.0	0.0	0.001	0.0	0.010	0.010	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB#-741-40 OWNER-RIO BLANCO OIL SHALE PROJECT LOCATIONS: X- 0.0 Y- 0.0 Z- 0.0
DATE DRILL COMPL- 61875 DATE CONV TO MONITOR- 61875 AQUIFER 1: 0.0 - 0.0 FT AQUIFER 2: 0.0 - 0.0 FT

SAMPLES	13	14	15	16	17
DATE	73176	82976	92476	111576	20177
DEPTH	6.95	6.69	9.67	9.42	6.81
TEMP	52.0	50.9	50.0	45.6	45.0
LAB ID					
LAB NUM	1507	2147	3545	4128	5905
METHOD	3	3	3	3	3
AQUIFER	A	A	A	A	A
WET					
ALUMINUM	0.0	0.0	0.0	-0.100	-0.100
AMMONIA	0.0	0.400	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	-0.010	0.0
BICARBONAT	480.000	555.000	555.000	645.000	605.000
CADMIUM	0.0	0.0	0.0	0.020	-0.010
CALCIUM	49.000	125.000	96.000	115.000	110.000
CARBONATE	-0.100	-0.100	-0.100	-0.100	-0.100
CHLORIDE	14.000	13.000	18.000	16.000	16.000
CHROMIUM	0.0	0.0	0.0	-0.010	-0.010
COPPER	0.0	0.0	0.0	-0.100	-0.100
FLUORIDE	0.300	0.100	0.400	0.300	0.200
HYDROXIDE	0.0	0.0	0.0	0.0	0.0
IRON	-0.050	-0.050	-0.050	-0.050	-0.050
LEAD	0.0	0.0	0.0	0.080	0.040
MAGNESIUM	125.000	92.000	105.000	31.000	83.000
MERCURY	0.0	0.0	0.0	-0.001	-0.001
NITRATE	5.800	6.800	0.0	0.0	12.500
PHOSPHATE	-0.100	0.100	-0.100	0.200	-0.100
POTASSIUM	3.000	0.0	5.000	5.000	3.000
SELENIUM	0.0	0.0	0.0	-0.010	-0.010
SIL DIOXID	28.000	17.000	30.000	26.000	25.000
SODIUM	180.000	150.000	130.000	310.000	200.000
SULFATE	580.000	450.000	455.000	430.000	480.000
SULFIDE	0.0	0.0	0.0	0.600	1.600
ZINC	0.0	0.0	0.0	0.100	-0.100
GROS ALPHA	0.0	0.0	0.0	1.700	4.300
GROSS BETA	0.0	0.0	0.0	16.000	0.0
HARDNESS	640.000	0.0	675.000	415.000	620.000
PH	6.600	6.600	6.400	6.100	0.0
CONDUCTANC	1520.000	1680.000	1440.000	1550.000	1750.000
DIS SOLIDS	1170.000	1260.000	1020.000	1230.000	1280.000
MANGANESE	-0.050	0.0	-0.050	-0.050	-0.050
ALKALINITY	395.000	455.000	455.000	530.000	495.000
CYANIDE	0.0	0.0	0.0	-0.010	-0.010
BORON	0.0	0.200	0.100	0.100	0.900
BARIUM	0.0	0.0	0.0	0.0	0.0
SILVER	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0
LITHIUM	0.0	0.0	0.0	-0.100	-0.100
COD	14.000	0.0	8.000	16.000	0.0
NITRITE-N	-0.010	0.0	1.500	24.500	0.100
BROMIDE	0.0	0.0	0.0	-0.100	-0.100

SAMPLES	13	14	15	16	17
C.O.D.	0.0	0.0	0.0	47.600	6.900
PHENOLS	0.0	0.0	0.0	-0.001	-0.001
KJELDAHL N	-0.100	0.700	2.000	2.800	4.100
BERYLLIUM	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.0	0.0	0.0	-0.100	-0.100
STRONTIUM	0.0	0.0	0.0	4.600	2.900
VANADIUM	0.0	0.0	0.0	0.0	0.0
ORTHO PHOS	-0.100	-0.100	-0.100	-0.100	-0.100
AMMONIA-N	-0.100	0.0	-0.100	0.500	0.200
DIS-ORG C	0.0	0.0	0.0	0.0	6.500
MBAS	-0.010	0.0	0.0	0.0	0.0
TOT COLIF	-10.000	0.0	0.0	0.0	0.0
FEC COLIF	-10.000	0.0	0.0	0.0	0.0
5-DAY B.O.	0.0	0.0	0.0	5.200	0.0
SPECTROGRAPHIC					
ALUMINUM	0.010	0.0	0.0	0.010	0.010
ANTIMONY	0.0	0.0	0.0	0.0	0.0
ARSENIC	0.0	0.0	0.0	0.0	0.0
BARIUM	0.0	0.0	0.0	0.0	0.0
BERYLIUM	0.0	0.0	0.0	0.0	0.0
BISMUTH	0.0	0.0	0.0	0.0	0.0
BORON	0.200	0.0	0.0	0.200	0.500
CADMIUM	0.0	0.0	0.0	0.0	0.0
CALCIUM	99999.000	0.0	0.0	99999.000	99999.000
CERIUM	0.0	0.0	0.0	0.0	0.0
CESIUM	0.0	0.0	0.0	0.0	0.0
CHROMIUM	0.0	0.0	0.0	0.0	0.0
COBALT	0.0	0.0	0.0	0.0	0.0
COLUMBIUM	0.0	0.0	0.0	0.0	0.0
COPPER	0.001	0.0	0.0	0.010	0.001
DYSPROSIUM	0.0	0.0	0.0	0.0	0.0
ERBIUM	0.0	0.0	0.0	0.0	0.0
EUROPIUM	0.0	0.0	0.0	0.0	0.0
GADOLINIUM	0.0	0.0	0.0	0.0	0.0
GALLIUM	0.0	0.0	0.0	0.0	0.0
GERMANIUM	0.0	0.0	0.0	0.0	0.0
GOLD	0.0	0.0	0.0	0.0	0.0
HAFNIUM	0.0	0.0	0.0	0.0	0.0
HOLMIUM	0.0	0.0	0.0	0.0	0.0
INDIUM	0.0	0.0	0.0	0.0	0.0
IRIDIUM	0.0	0.0	0.0	0.0	0.0
IRON	0.010	0.0	0.0	0.010	0.001
LANTHANUM	0.0	0.0	0.0	0.0	0.0
LEAD	0.0	0.0	0.0	0.010	0.0
LITHIUM	0.0	0.0	0.0	0.0	0.0
LUTETIUM	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	99999.000	0.0	0.0	99999.000	99999.000
MANGANESE	0.0	0.0	0.0	0.050	0.0
MERCURY	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	0.010	0.0	0.0	0.010	0.010
NEODYMIUM	0.0	0.0	0.0	0.0	0.0
NICKEL	0.0	0.0	0.0	0.0	0.0
OSMIUM	0.0	0.0	0.0	0.0	0.0
PALLADIUM	0.0	0.0	0.0	0.0	0.0

SAMPLES	13	14	15	16	17
PLATINUM	0.0	0.0	0.0	0.0	0.0
POTASSIUM	0.010	0.0	0.0	0.010	0.010
PRASEODYMI	0.0	0.0	0.0	0.0	0.0
RADIUM	0.0	0.0	0.0	0.0	0.0
RHENIUM	0.0	0.0	0.0	0.0	0.0
RHODIUM	0.0	0.0	0.0	0.0	0.0
RUBIDIUM	0.0	0.0	0.0	0.0	0.0
RUTHENIUM	0.0	0.0	0.0	0.0	0.0
SAMARIUM	0.0	0.0	0.0	0.0	0.0
SCANDIUM	0.0	0.0	0.0	0.0	0.0
SELENIUM	0.0	0.0	0.0	0.0	0.0
SILICON	2.000	0.0	0.0	2.000	0.0
SILVER	0.0	0.0	0.0	0.0	0.0
SODIUM	5.000	0.0	0.0	99999.000	0.0
STRONTIUM	0.100	0.0	0.0	0.100	0.0
TANTALUM	0.0	0.0	0.0	0.0	0.0
TERBIUM	0.0	0.0	0.0	0.0	0.0
THALLIUM	0.0	0.0	0.0	0.0	0.0
THORIUM	0.0	0.0	0.0	0.0	0.0
THULIUM	0.0	0.0	0.0	0.0	0.0
TIN	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.0	0.0	0.0	0.0	0.0
TUNGSTEN	0.0	0.0	0.0	0.0	0.0
URANIUM	0.0	0.0	0.0	0.0	0.0
VANADIUM	0.0	0.0	0.0	0.0	0.0
YTTERBIUM	0.0	0.0	0.0	0.0	0.0
YTTRIUM	0.0	0.0	0.0	0.0	0.0
ZINC	0.0	0.0	0.0	0.0	0.0
ZIRCONIUM	0.0	0.0	0.0	0.0	0.0

SAMPLE ITEM RANGE AND AVERAGE

ITEM	COMBINED AQUIFER LOW	HIGH	AVERAGE	# ITEMS AVERAGED	STD DEV.	A AQUIFER LOW	HIGH	AVERAGE	# ITEMS AVERAGED	STD DEV.
WET										
ALUMINUM	**********	0.0	0.0	0	0.0	-0.100	1.200	0.127	26	0.285
AMMONIA	**********	0.0	0.0	0	0.0	0.030	6.400	0.537	107	0.883
ARSENIC	**********	0.0	0.0	0	0.0	-0.010	-0.100	0.000	118	0.001
BICARBONAT	**********	0.0	0.0	0	0.0	360.000	810.000	562.019	156	101.001
CADMIUM	**********	0.0	0.0	0	0.0	-0.010	1.100	0.027	126	0.105
CALCIUM	**********	0.0	0.0	0	0.0	28.000	240.000	98.365	156	34.050
CARBONATE	**********	0.0	0.0	0	0.0	-0.010	120.000	7.323	155	17.153
CHLORIDE	**********	0.0	0.0	0	0.0	1.300	71.000	17.731	156	8.904
CHROMIUM	**********	0.0	0.0	0	0.0	-0.010	0.200	0.007	125	0.034
COPPER	**********	0.0	0.0	0	0.0	-0.010	8.000	0.424	126	1.117
FLUORIDE	**********	0.0	0.0	0	0.0	-0.100	1.200	0.326	155	0.173
HYDROXIDE	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
IRON	**********	0.0	0.0	0	0.0	-0.050	28.000	4.687	156	5.791
LEAD	**********	0.0	0.0	0	0.0	0.010	13.000	0.310	125	1.166
MAGNESIUM	**********	0.0	0.0	0	0.0	3.700	150.000	87.468	156	36.443
MERCURY	**********	0.0	0.0	0	0.0	-0.001	-0.010	0.000	126	0.000
NITRATE	**********	0.0	0.0	0	0.0	-0.100	165.000	6.421	141	14.798
PHOSPHATE	**********	0.0	0.0	0	0.0	-0.010	1.600	0.071	156	0.183
POTASSIUM	**********	0.0	0.0	0	0.0	-1.000	16.000	5.142	59	3.822
SELENIUM	**********	0.0	0.0	0	0.0	-0.010	-0.100	0.0	126	0.0
SIL DIOXID	**********	0.0	0.0	0	0.0	16.000	44.000	29.891	156	5.088
SODIUM	**********	0.0	0.0	0	0.0	66.000	450.000	188.891	156	59.068
SULFATE	**********	0.0	0.0	0	0.0	150.000	1000.000	458.974	156	156.606
SULFIDE	**********	0.0	0.0	0	0.0	-0.010	1.600	0.275	28	0.508
ZINC	**********	0.0	0.0	0	0.0	0.010	13.000	0.583	124	1.332
GROS ALPHA	**********	0.0	0.0	0	0.0	0.200	31.000	10.977	99	6.802
GROSS BETA	**********	0.0	0.0	0	0.0	1.000	35.000	12.644	36	9.542
HARDNESS	**********	0.0	0.0	0	0.0	280.000	820.000	600.458	142	141.396
PH	**********	0.0	0.0	0	0.0	-6.000	7.200	6.401	145	0.620
CONDUCTANC	**********	0.0	0.0	0	0.0	860.000	2275.000	1551.422	155	344.126
DIS SOLIDS	**********	0.0	0.0	0	0.0	640.000	2090.000	1185.256	156	288.954
MANGANESE	**********	0.0	0.0	0	0.0	-0.050	27.000	2.309	148	4.143
ALKALINITY	**********	0.0	0.0	0	0.0	51.000	1505.000	473.398	156	124.974
CYANIDE	**********	0.0	0.0	0	0.0	-0.010	0.200	0.003	125	0.019
BORON	**********	0.0	0.0	0	0.0	-0.010	27.000	0.991	148	2.674
BARIUM	**********	0.0	0.0	0	0.0	-1.000	-1.000	0.0	96	0.0
SILVER	**********	0.0	0.0	0	0.0	-0.010	-0.100	0.007	95	0.013
NICKEL	**********	0.0	0.0	0	0.0	0.010	0.200	0.074	96	0.057
LITHIUM	**********	0.0	0.0	0	0.0	-0.100	0.100	0.007	30	0.025
DOC	**********	0.0	0.0	0	0.0	2.900	292.000	43.424	111	57.976
NITRITE-N	**********	0.0	0.0	0	0.0	-0.010	150.000	5.158	52	21.622
BROMIDE	**********	0.0	0.0	0	0.0	-0.010	0.900	0.273	22	0.349
C.O.D.	**********	0.0	0.0	0	0.0	-1.000	85.000	17.607	30	16.697
PHENOLS	**********	0.0	0.0	0	0.0	-0.001	0.013	0.001	28	0.004
KJELDAHL N	**********	0.0	0.0	0	0.0	-0.100	8.800	2.143	60	1.812
BERYLLIUM	**********	0.0	0.0	0	0.0	-0.020	2.500	0.612	8	0.884
MOLYBDENUM	**********	0.0	0.0	0	0.0	-0.100	-0.100	0.0	16	0.0
STRONTIUM	**********	0.0	0.0	0	0.0	1.400	6.500	3.769	16	1.577
VANADIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0

SAMPLE ITEM RANGE AND AVERAGE

ITEM	COMBINED AQUIFER LOW	HIGH	AVERAGE	# ITEMS AVERAGED	STD DEV.	A AQUIFER LOW	HIGH	AVERAGE	# ITEMS AVERAGED	STD DEV.
ORTHO PHOS	**********	0.0	0.0	0	0.0	-0.100	1.000	0.044	54	0.149
AMMONIA-N	**********	0.0	0.0	0	0.0	-0.100	5.300	0.468	38	0.933
DIS-ORG C	**********	0.0	0.0	0	0.0	2.000	9.500	4.500	16	2.657
MBAS	**********	0.0	0.0	0	0.0	-0.010	-0.010	0.0	6	0.0
TOT COLIF	**********	0.0	0.0	0	0.0	-10.000	250.000	81.429	7	91.911
FEC COLIF	**********	0.0	0.0	0	0.0	-10.000	40.000	8.571	7	15.736
5-DAY B.O.	**********	0.0	0.0	0	0.0	3.800	5.200	4.300	3	0.781
SPECTROGRAPHIC										
ALUMINUM	**********	0.0	0.0	0	0.0	0.001	5.000	0.441	127	0.935
ANTIMONY	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
ARSENIC	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
BARIUM	**********	0.0	0.0	0	0.0	0.001	0.050	0.008	54	0.013
BERYLIUM	**********	0.0	0.0	0	0.0	0.001	0.001	0.001	5	0.0
BISMUTH	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
BORON	**********	0.0	0.0	0	0.0	0.010	0.500	0.361	127	0.176
CADMIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
CALCIUM	**********	0.0	0.0	0	0.0	10.000	99999.000	10.000	6	0.0
CERIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
CESIUM	**********	0.0	0.0	0	0.0	0.001	0.001	0.001	1	0.0
CHROMIUM	**********	0.0	0.0	0	0.0	0.000	0.020	0.004	17	0.006
COBOLT	**********	0.0	0.0	0	0.0	0.001	0.001	0.001	4	0.0
COLUMBIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
COPPER	**********	0.0	0.0	0	0.0	0.001	0.050	0.013	126	0.014
DYSPROSIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
ERBIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
EUROPIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
GADOLINIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
GALLIUM	**********	0.0	0.0	0	0.0	0.001	0.010	0.004	6	0.005
GERMANIUM	**********	0.0	0.0	0	0.0	0.001	0.001	0.001	1	0.0
GOLD	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
HAFNIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
HOLMIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
INDIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
IRIDIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
IRON	**********	0.0	0.0	0	0.0	0.001	5.000	0.251	126	0.709
LANTHANUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
LEAD	**********	0.0	0.0	0	0.0	0.001	0.500	0.030	54	0.076
LITHIUM	**********	0.0	0.0	0	0.0	0.001	0.100	0.007	86	0.015
LUTETIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
MAGNESIUM	**********	0.0	0.0	0	0.0	5.000	99999.000	2228.111	9	4405.680
MANGANESE	**********	0.0	0.0	0	0.0	0.001	0.500	0.068	118	0.121
MERCURY	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
MOLYBDENUM	**********	0.0	0.0	0	0.0	0.001	0.050	0.009	87	0.013
NEODYMIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
NICKEL	**********	0.0	0.0	0	0.0	0.001	0.070	0.011	7	0.026
OSMIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
PALLADIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
PLATINUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
POTASSIUM	**********	0.0	0.0	0	0.0	0.010	2.000	0.519	126	0.507
PRASEODYMI	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0

SAMPLE ITEM RANGE AND AVERAGE

ITEM	COMBINED AQUIFER LOW	HIGH	AVERAGE	# ITEMS AVERAGED	STD DEV.	A AQUIFER LOW	HIGH	AVERAGE	# ITEMS AVERAGED	STD DEV.
RADIUM	**********	0.0	0.0	0	0.0	0.100	1.200	0.335	60	0.231
RHENIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
RHODIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
RUBIDIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
RUTHENIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
SAMARIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
SCANDIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
SELENIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
SILICON	**********	0.0	0.0	0	0.0	2.000	99999.000	4.897	117	2.601
SILVER	**********	0.0	0.0	0	0.0	0.000	0.100	0.008	38	0.022
SODIUM	**********	0.0	0.0	0	0.0	1.000	99999.000	6.239	88	2.758
STRONTIUM	**********	0.0	0.0	0	0.0	0.010	1.000	0.105	116	0.085
TANTALUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
TERBIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
THALLIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
THORIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
THULIUM	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
TIN	**********	0.0	0.0	0	0.0	0.001	0.001	0.001	15	0.0
TITANIUM	**********	0.0	0.0	0	0.0	0.001	1.000	0.029	91	0.118
TUNGSTEN	**********	0.0	0.0	0	0.0	**********	0.0	0.0	0	0.0
URANIUM	**********	0.0	0.0	0	0.0	0.005	0.008	0.006	2	0.002
VANADIUM	**********	0.0	0.0	0	0.0	0.001	0.020	0.007	10	0.008
YTTERBIUM	**********	0.0	0.0	0	0.0	0.001	0.001	0.001	5	0.0
YTTRIUM	**********	0.0	0.0	0	0.0	0.010	0.020	0.012	5	0.004
ZINC	**********	0.0	0.0	0	0.0	0.001	0.020	0.005	44	0.006
ZIRCONIUM	**********	0.0	0.0	0	0.0	0.010	0.010	0.010	2	0.0

SAMPLES IN AQUIFER = 0 SAMPLES IN AQUIFER = 156

Form 1279-3
(June 1984)

BORROWE

DATE LOANED	BORROWER

USDI - BLM